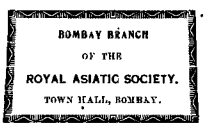
Annual Report
on the
Survey Operations (other than
Cadastral Surveys)
1907-1908 to 1910-11





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ANNUAL REPORT

ON THE

SURVEY OPERATIONS (OTHER THAN CADASTRAL SURVEYS)

DURING THE YEAR

1907-1908.

133048

From 1st October 1907 to 30th September 1908.



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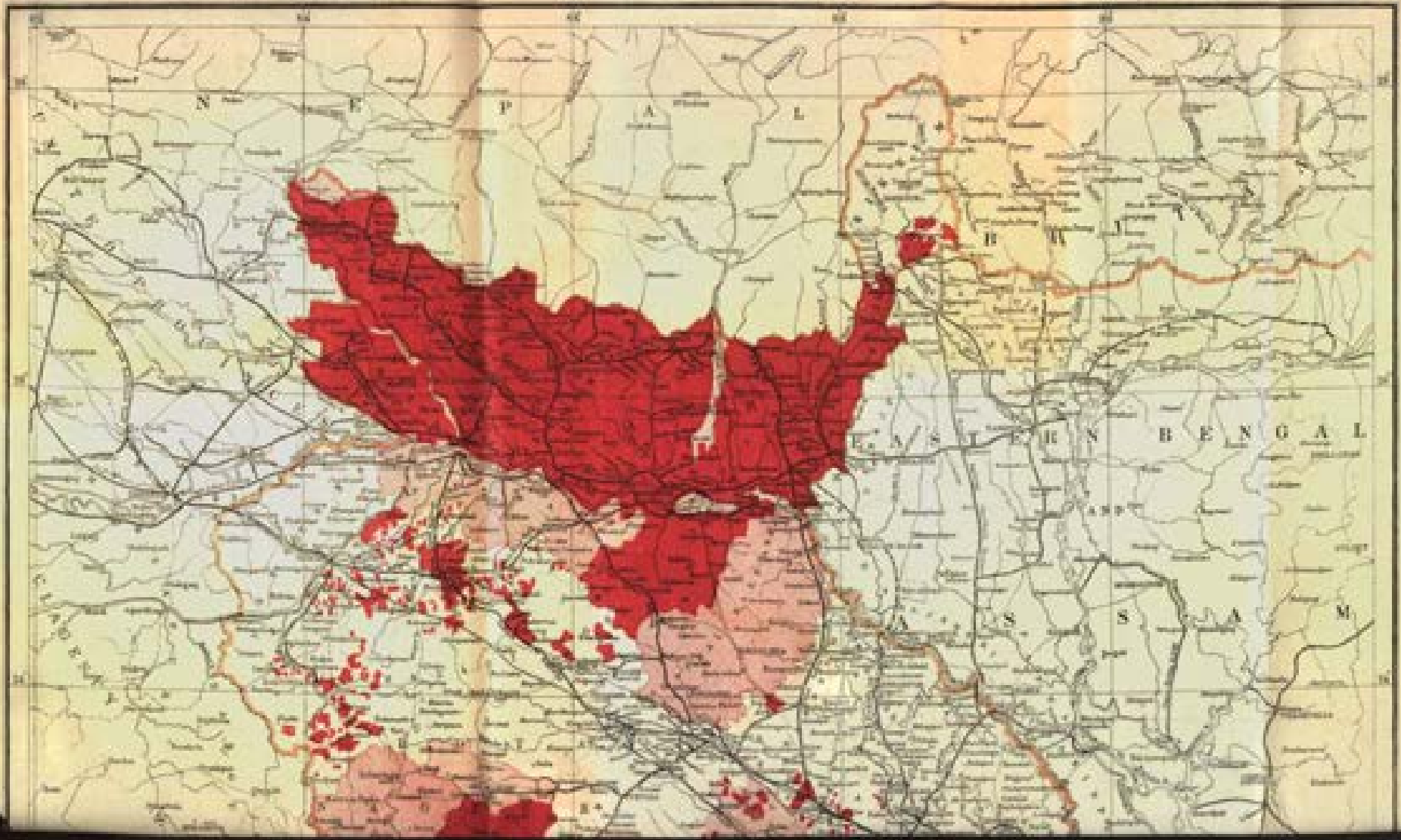
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NOTE.

THE situation regarding the items dealt with in paragraph 14 of this report changed considerably between the writing of the report in October 1908 and its publication, but it has been found impossible, without serious delay, to make the necessary corrections in the report.

F. C. HIRST, CAPTAIN, I.A.,

Offg. Superintendent of Provincial Surveys, Benga..


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THE PROVINCE
OF
BENGAL

ANNUAL REPORT

OF

THE SUPERINTENDENT OF PROVINCIAL SURVEYS, BENGAL

ON THE

SURVEY OPERATIONS IN BENGAL (OTHER THAN CADASTRAL SURVEYS)

DURING THE YEAR 1907-08.

No. $\frac{4758}{R-7}$.

FROM CAPTAIN F. C. HIRST, I.A.,

Offg. Superintendent of Provincial Surveys in Bengal,

TO THE SECRETARY TO THE BOARD OF REVENUE, LOWER PROVINCES.

Dated Hazaribagh, the 15th December 1908.

SIR,

I HAVE the honour to submit my report on the Survey operations in Bengal during the past survey year, namely from 1st October 1907 to 30th September 1908.

2. I have been in charge for the whole period under report.

CHAPTER I.

General Remarks.

3. The outturn of the year, namely 5,107 square miles of traverse survey, and 1,311 square miles of topographical survey, is considerably less than last year; the main reason for this deficit is the final transfer, which culminated in handing over the cadastral portion of No. 4 Party (Bihar) to the Settlement Department, on 1st October 1907, of all Cadastral survey to the control of the Director of Land Records.

The programme assigned to me was, in all cases, completed.

Changes during the year.

4. On 1st October 1907 the two cadastral sections of No. 4 Party (Bihar) were handed over bodily to the Settlement Department. The change was made with the utmost smoothness; there were two reasons for the absence of any hitch; first the fact that the transfer was deliberately and not hastily made (as was the case of a similar transfer of No. 5 Party's cadastral sections on 1st October 1905); the result of deliberation was that I was able to make use of the experience obtained when No. 5 Party was reduced and was able to give Mr. N. Bedford, who was in charge of No. 4 Party, a definite procedure which was to be followed in each of the many items of organization which had to be handed over to Mr. Murphy, I.C.S., the Settlement Officer of Bihar. I lay no claim to credit for this, and am glad to have this opportunity on placing on record the thorough way in which Mr. Bedford, assisted by his staff, carried out the transfer. The second reason for smoothness was that Mr. Murphy had the experience of the Chota Nagpur incident behind him, and I feel certain that his hearty co-operation with us on all points, and his free consultation with Mr. J. Reid, I.C.S., Settlement Officer of Chota Nagpur, was a very important item in the setttlement of many of the difficulties which must crop up on an occasion such as that reported on here. I consider that the Settlement Department has every reason to be grateful to Mr. Bedford, and that we, on our side, have much reason for gratitude to Messrs. Murphy and Reid.

5. The traverse sections of Nos. 4 and 5 Parties were amalgamated with the head-quarters sections of those parties at the beginning of this survey year; these amalgamations were the first steps in the direction of the placing of all Traverse work in Bengal under one executive officer. Numbers 4 and 5 Parties are now in process of being formed into one charge, the final organization of which will be completed by November 1st, 1908. I acknowledge that the change just referred to might have been made at one time; it was, however, considered best to use caution, and now that we know that the preliminary steps proved advantageous administratively and economical executively, there remains no reason for postponing the final move.

6. In paragraph 3(*f*) of my last year's report, I mentioned that our accounts system was receiving considerable attention. In that report I was over sanguine and the changes I expected did not take place until a new system, based on the principles on which the Settlement Department works its accounts, was introduced in my own office and that of No. 4 Party during the recess of 1908. The new system already existed in the Bengal Drawing Office, and at present all the Bengal Survey accounts, with the exception of those of No. 5 Party and the Calcutta Surveys, are similar in principle. The amalgamation of Nos. 4 and 5 Parties will only leave one section which works under the old principles; and I do not propose any alteration in its case at present. The work of the Calcutta Surveys is in many ways unusual and it appears to be best to leave its case undecided until Major Crichton returns to India.

I must acknowledge the cordial help given by all ranks in the introduction of the new system; Mr. Picachy, who was kindly lent me by the Accountant-General, Bengal, has throughout given all possible help and his services have been of the utmost value.

At present, since the Eastern Bengal Survey work is still under my control, and since the old system of accounts still exists in the Eastern Bengal

Surveys, there are two sets of accounts in vogue in my office; some confusion necessarily results, but the relief given by the new system more than compensates for any discomfort which we are experiencing.

One result of the new system is a considerable reduction in establishment.

7. During the year attempts have been made to wipe off many outstanding advances of pay, etc., which our accounts had, for sometime past, shown. The Accountant-General has been kind enough to help us by advice and co-operation, and I am glad to be able to report a practically clear sheet. The outstandings were really the result of our employing a temporary staff with too small a stiffening of pensionable labour, and in addition, were caused by the possibility of laxness in audit which the old system of accounts permitted. I do not think it possible for a similar situation to arise again. I should mention here that Major Crichton inaugurated the campaign against the outstandings and all that I have done has been to complete his plans.

8. Frequent transfers amongst executive officers and the changes caused by the giving up of the cadastral survey by the Survey of India have necessitated a complete examination of our instrumental and other equipment. Such discrepancies, as were found, have been adjusted, and our equipment is now fully accounted for. Pending the reorganization of local surveys, which I understand, is just ahead of us, the whole equipment has been overhauled and improved as far as is possible; there is, however, still room for improvement.

9. Suggestions have been forwarded to the Board of Revenue for fixing my powers; at present, in some cases I have less power than an officer in charge of a Party of the Survey of India, serving directly under the Surveyor-General; in other cases powers in excess of those which I really need have, in the past, been assumed to be permissible. It is hoped that the suggestions recently put forward will result in such clearly defined powers as will give accounts officers a proper control of our spending powers, and will stop that hampering of the Superintendent which at present is unavoidable.

10. The future of Bengal Surveys has, during the year, been freely discussed. It is proposed that Bengal and Eastern Bengal and Assam shall each have its own Survey Department, but nothing definite has yet come of these proposals. The brief statement above gives no idea of the very considerable amount of work which the proposals have thrown on me; this work has included the practical formation of two new departments in addition to my ordinary work, since it is hoped that the partition will take place from the beginning of the next survey year. My arrangements more or less are complete, and on the arrival of Major Crichton a few weeks hence, it should be possible for the two departments to be working independently within a very short time. The present basis of organization is that nothing should be done which would in any way militate against efficiency should the proposed change not take place, and that such changes as Major Crichton may wish to make should be permissible after his return. It will be understood that the necessity for the two provisos given above has not tended to simplify my work, but it is clear that those provisos were essential under the circumstances.

11. In the Board's letter No. 4978A., dated the 18th December 1907 sanction was given for the prosecution of a *diara* survey on a new system and on a somewhat large scale of operations. The details of arrangements had been written out and such preliminary work as should have been done in the latter half of this survey year was about to commence, when it was decided to postpone the work. Because the scheme is based on my own suggestions, I am leaving full notes for Major Crichton's information, as this work, when taken up, will be administrated by him.

12. The head-quarters of my office have been moved from Dinapore to to Hazaribagh. Numbers 4 and 5 Parties also keep their permanent head-quarters at Hazaribagh. This move has tended to reduce correspondence and has certainly simplified accounts difficulties. A second reason for this move was to see if it was not possible to avoid camp offices in the field; the working of the field-season under review has proved that field offices under existing circumstances can be dispensed with, and the result will be a considerable saving of money; this saving should show itself in the next survey year.

13. It had been hoped that the Bengal Drawing Office would be relieved of work for Eastern Bengal by the end of the survey year; the hope was premature, but it seems probable that the end of the financial year will see the Bengal Drawing Office working only for Bengal. I am about to submit final plans for buildings and estimates for plant, etc., to the Eastern Bengal and Assam Government.

14. Proposals have been put forward for a new system of making Thana maps; greater accuracy is aimed at and the proposals embrace:—

(*a*) The abolition of Standard mapping in the Local Drawing Office.

(*b*) The abolition of Traverse charts as now prepared for the Surveyor-General.

(*c*) The preparation of Thana maps on a proper projection and the publication of them in colours. The scheme allows for similar details as those now shown on Standard maps being shown on Thana maps.

(*d*) The providing of the Surveyor-General 1" detailed maps by thanas for supplementary survey purposes.

(*e*) In (*d*) is included the showing of all permanent marks left on the ground and the provision separately of a co-ordinate index to those marks.

The Surveyor-General has accepted the above proposals and I only await the wishes of the Eastern Bengal and Assam Government to put forward detailed rules for the preparation of the maps and indices in the new style.

15. Steps are at present being taken to take over and store in the Bengal Drawing Office, the Revenue Survey maps of the province; these are at present racked in the head-quarters office of the Survey of India.

16. The index maps in this report have been reproduced in the Bengal Drawing Office instead of in the head-quarters office of the Survey of India and I have practically completed estimates for submission to the Board for the taking over, by the Bengal Drawing Office, of the printing of maps and the charts for all the annual reports of heads of departments in Bengal.

17. Practically all the theodolites in Bengal surveys have been sent to the Mathematical Instruments Office to be converted to the railway pattern of stand; the result should be a more rapid outturn in the future.

18. The Sunderbans survey having been completed the Topographical Section of No. 6 Party is being broken up.

19. A considerable number of minor changes have been introdnced during the year, but they are not of sufficient importance to be entered here.

Miscellaneous.

20. Attention is drawn to the remarks made in paragraph 49, regarding the comparision of direct distances obtained from traverse work with those obtained by triangulation.

21. The approximate programme for the next year is:—

(1) 1,600 square miles of the Shahabad district.
(2) 296 square miles of the Manbhum district.
(3) 1,400 square miles of the Hazaribagh District.
(4) Several miscellaneous surveys.

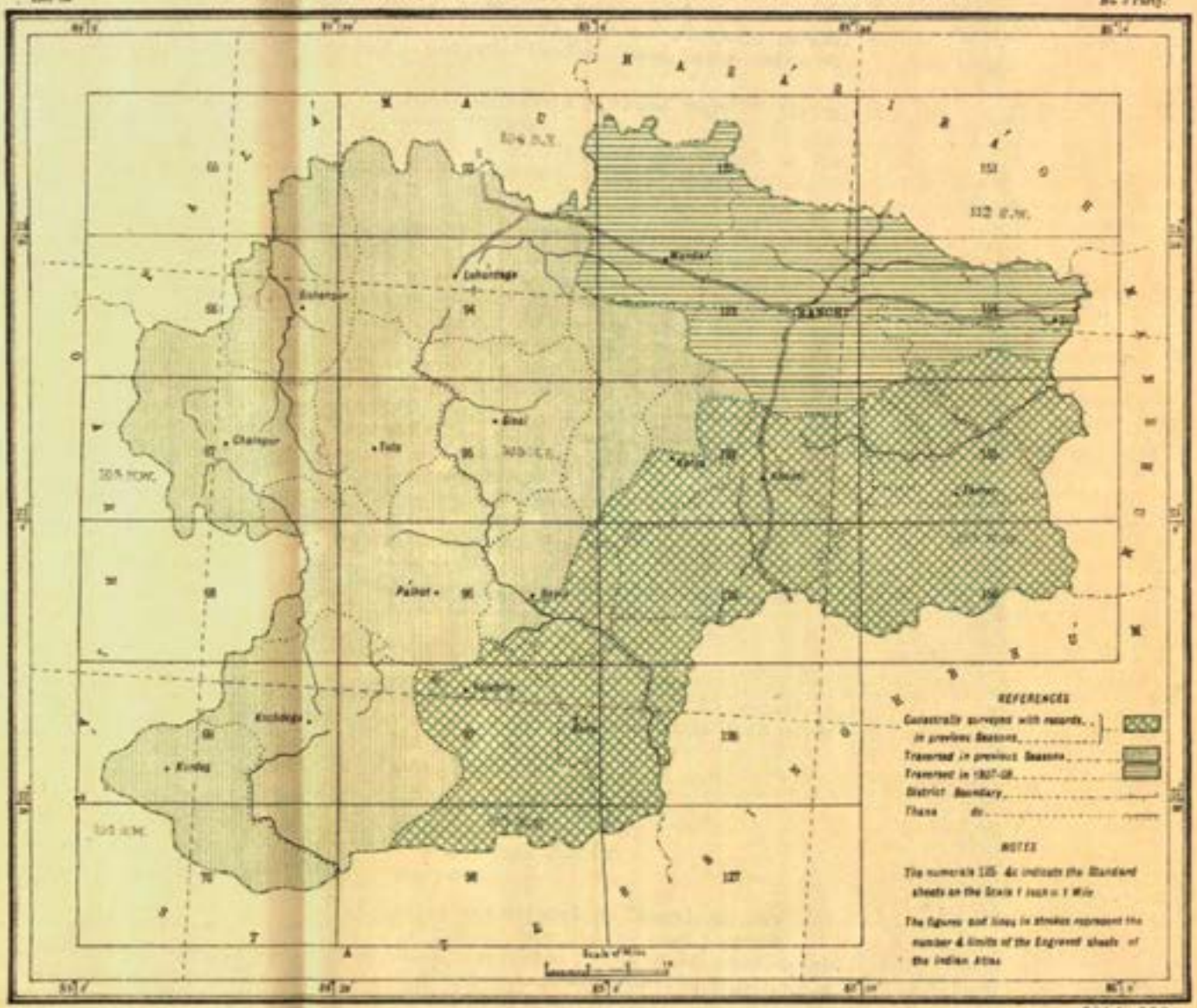
22. Lieutenant R. Foster, I. A. was deputed to Bengal surveys for training at the beginning of the survey year; he is making good progress.

23. The cost-rates and expense figures quoted in this report must not be looked upon as final. Under the existing system of accounts it is impossible to give final figures immediately after the close of a survey year. The introduction of the new system of accounts will, I hope, permit of accurate figures being given in future annual reports.

24. I have made every possible attempt to keep this report within the space allowed for it. Owing, however, to the importance of various subjects reported on, and to the extension of the Drawing Office programmes, I fear that the report may slightly exceed its page limit.

BENGAL SURVEYS

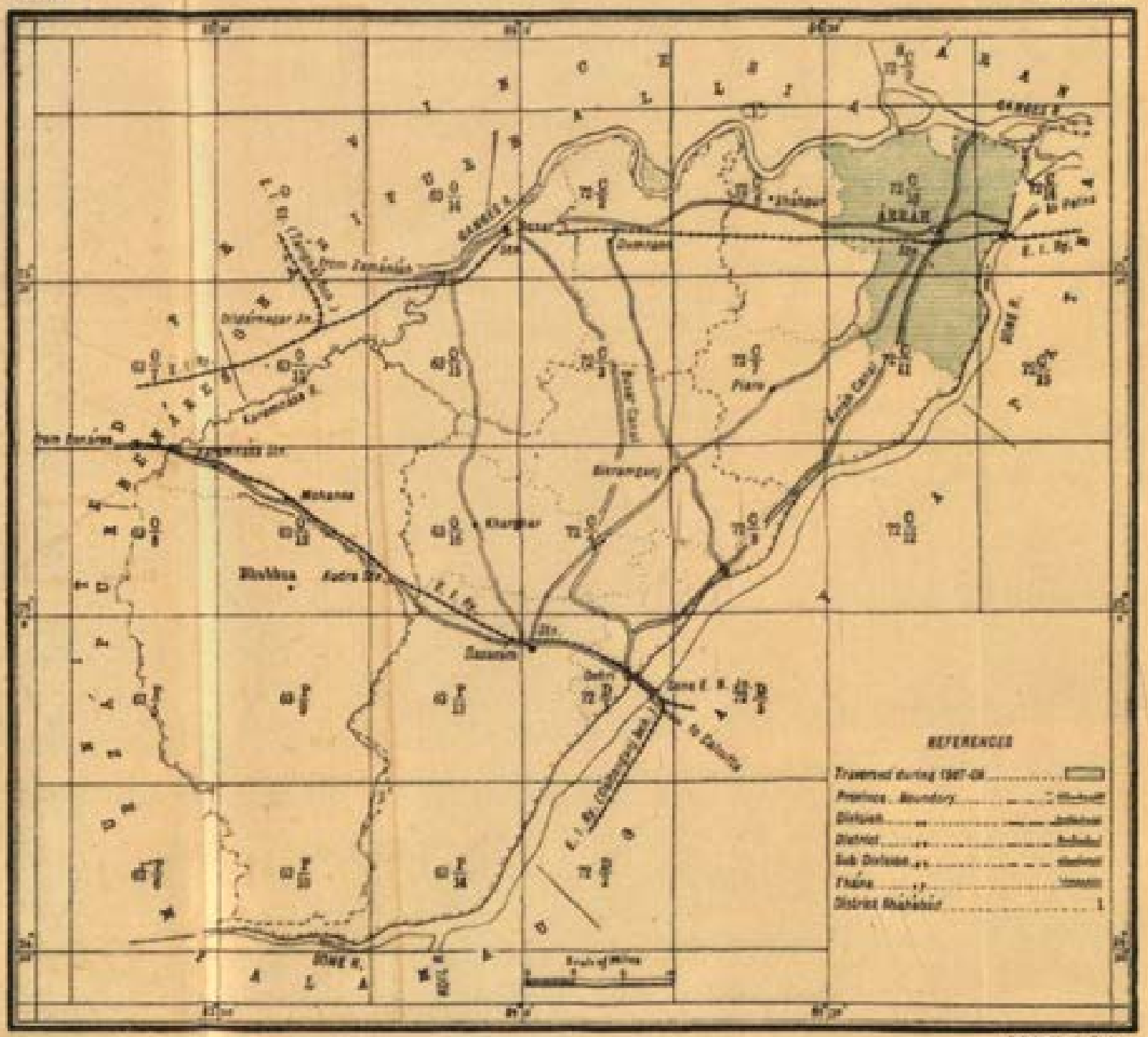
INDEX TO THE TRAVERSE & CADASTRAL SURVEYS IN DISTRICT RANCHI.


REFERENCES
Cadastrally surveyed with records, in previous Seasons
Traversed in previous Seasons
Traversed in 1907-08
District Boundary
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NOTES
The numerals 125 &c indicate the Standard sheets on the Scale 1 inch = 1 Mile
The figures and lines in strokes represent the number & limits of the Engraved sheets of the Indian Atlas
Scale of Miles
RANCHI
Lohardaga
Chaibasa
Palkot
Kolebira
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BENGAL SURVEYS

INDEX TO THE TRAVERSE SURVEYS IN DISTRICT SHÁHÁBÁD

1907-08 No. 4 PARTY



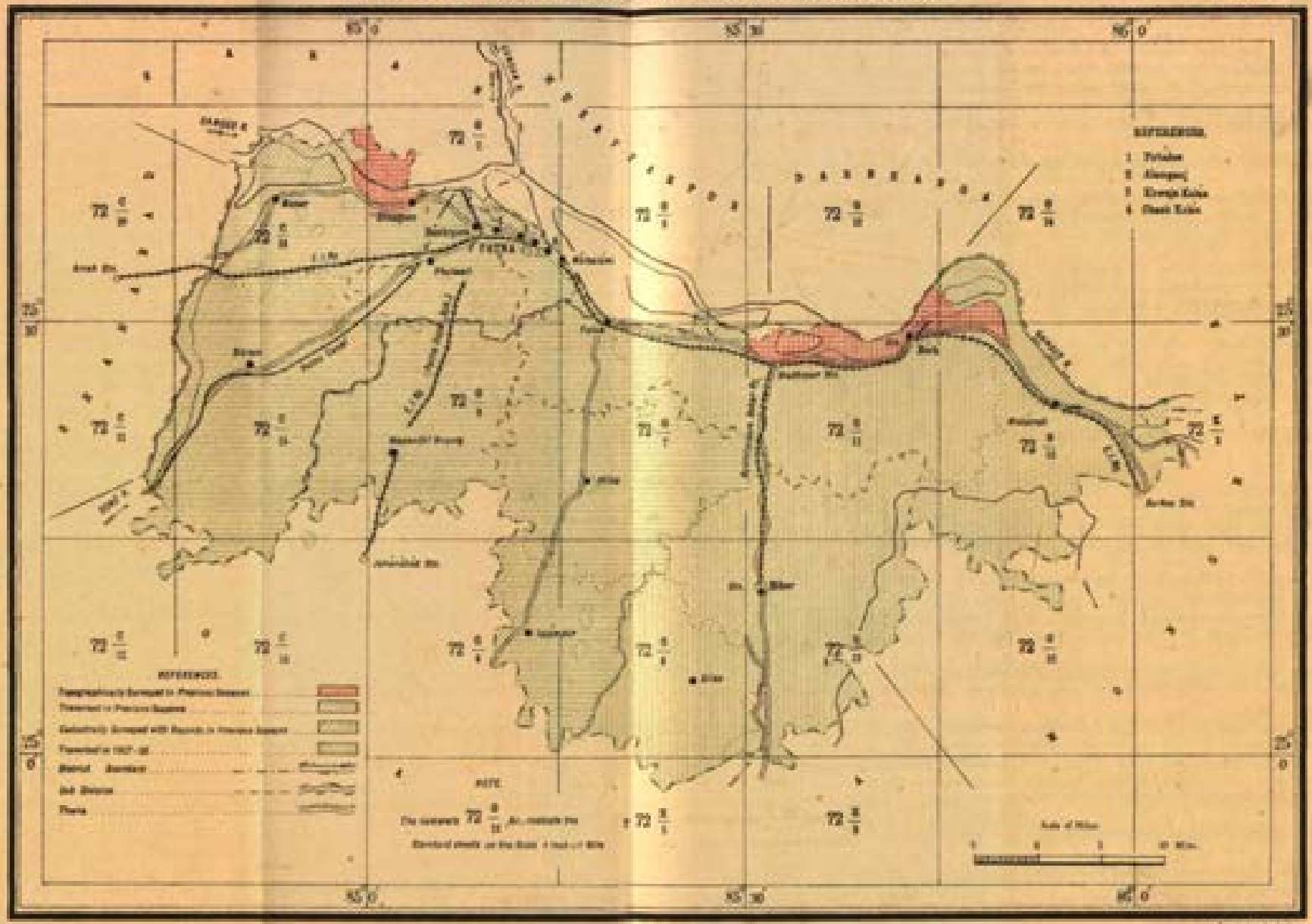
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NOTES.—The Longitudes are reformed to the Greenwich Meridian.

The numbers 62 $\frac{P}{16}$ &c. indicate the 16 X 16 Standard sheets on the Scale 1 inch = 1 Mile.

BENGAL.

INDEX TO THE TRAVERSE & CADASTRAL SURVEYS IN DISTRICT PATNA



CHAPTER II.

PART I.—REPORTS ON SURVEYS IN TEMPORARILY-SETTLED AND GOVERNMENT ESTATES UNDER SETTLEMENT OF RENTS AND LAND REVENUE—*Nil.*

PART II.—REPORTS ON SURVEYS IN PRIVATE ESTATES.

PATNA DISTRICT.

25. An area of 1,141·72 square miles falling in thanas Islampur, Hilsa, Fatua, Patna, Phulwari, Dinapur, Maner, and Bikram was traversed for cadastral survey. This area includes 23·90 square miles of Government and Tikari Estates as well as the Dinapur Cantonment; credit has been taken for this 23·90 square miles in this report as it is made up of small scattered areas.

26. There are 24,757 new theodolite stations in the area, and these were marked with 4,021 stones, 19,644 clay cylinders and 1,092 pegs.

27. Two great trigonometrical stations were connected with and 107 azimuths observed and computed. The direct distance between these stations by traverse, as compared with the distance by triangulation, is 8·8 feet per mile in defect.

28. The mean magnetic variation is 1° 15′ East.

29. The plots of the area fall on 2,478 sheets. These together with 4″ plots and 2″ reductions for "thana" maps have been despatched to the Settlement Officer of Bihar.

30. The origin adopted was the same as last year *viz.* the intersection of North Latitude 25° 30′ with East Longitude 85° 30′.

31. The demarcation was well done, and the comparison with the Revenue Survey maps shows little difference between the old and new boundaries.

32. The whole work proved well mathematically, and all the computations are complete.

SHAHABAD DISTRICT.

33. An area of 347·15 square miles falling in thana Arrah, was traversed for cadastral survey; this includes 2·26 square miles of the municipal lands already surveyed. The *diara* areas of the thana were omitted and will be surveyed later.

34. Of the 702 villages traversed some were very small in extent; the smallest was about a quarter of an acre; it would appear to be advisable that such small villages be amalgamated with their neighbours for they are very apt to become lost altogether. The Settlement Officer will deal with this point next year.

35. There were 7,057 new theodolite stations in the area; 1,291 were marked with stones, 5,358 with clay cylinders, 119 with bricks, 34 with iron pegs and 255 with wooden pegs.

36. As no great trigonometrical stations exist close to this area, no connections were made. Thirty-one azimuths were observed and computed.

37. The mean magnetic variation is probably 1° 15′ East. This district is abnormal and any variation should be accepted with great caution.

38. The plots fall on 701 sheets; these with 4″ and 2″ reductions have been sent to the Settlement Officer of Bihar.

39. The origin adopted was the intersection of North Latitude 25° 15′ with East Longitude 84° 15′.

40. The demarcation by the inhabitants was good.

41. The whole work proved well mathematically and all computations are complete.

RANCHI DISTRICT.

Traverse Survey.

42. In this District an area of 1,208 square miles remained for completion. This area was traversed during the year; it covers thanas Barma,

Mander, Ranchi (including Urumanjhi), Argara and portions of Rahe and Silli. About one-third of the area consists of high hills covered with jungle; the balance is open and undulating.

43. Practically no demarcation was done by the inhabitants and the traversers were guided by lists of villages obtained from the Deputy Commissioner. Although demarcation was not attempted by them, the inhabitants freely gave help in other directions.

44. The origin used was that adopted in previous years, viz.,—the intersection of North Latitude 22° 30′ with East Longitude 86°.

45. One hundred and eighty-nine azimuths were observed and the mean magnetic variation is 1° 15′ East.

46. In the hilly area the substense bar was frequently used; here the health of the establishment was indifferent; seven men died of malarial fever and its effects, and one from snake-bite.

47. As heretofore local stones were used to mark traverse stations. In all there were 24,612, new stations. Of these 19,671 were marked with stones (trijunctions having a triangle and dot cut in them and other stations a broad arrow), 3,112 with pegs and 1,802 had marks cut on rocks *in situ* and 27 backed clay cylinders.

48. Double chains of different lengths were used on all main and subcircuit work, and on village work in the hilly area.

49. Five great trigonometrical stations were connected with; the average error in direct distance per mile of traverse work, as compared with the triangulated distances was 7·7 feet per mile; the traverse work, generally, however, proves within a much smaller percentage of error; our method of comparing is the only one possible, and it is unfortunate that it often tends to give an erroneous idea of the accuracy of the measurements. It is interesting to note that triangulated distances take no account of irregularities in the earth's surface while the Traverser is compelled to take the surface as he finds it. Personally I do not consider the comparision of direct distances between great trigonometrical stations, as arrived at by traverse, with those obtained by triangulation to be of any great value, and I think that the true test is the amount of correction applied to the traverse work to make it prove. It is a peculiar thing that the more round about the course from which direct traverse distances are arrived at the better the result; the comparision we use is that by the *shortest* available routes and how far it is fair to compare work from its *worst* point of view with a triangulation which has served as a model of accuracy to the world is, at first sight, distinctly open to question. It practically never occurs that a direct distance derived from traverse work is as long as that obtained by triangulation and all the past reports of Revenue Surveys bear this fact out; the error is made up of the stretching of chains and surface inequalities and on the average errors of several years past, the correction needed is $\frac{1}{4}$ to $\frac{1}{2}$ of an inch per 66 feet. I have written at length on this point so as to disarm criticism in the future; the results of comparison as we show them are not absolutely true guides to the accuracy of the traverse work and they should not be taken as such. If then we used chains of known inaccurate length (one-half to three-quarters of an inch short in a 66 foot chain), we should obtain better results by the shortest route, but worse by longer route of traverse; to adopt such a course is therefore is of no advantage.

50. The entire work has proved well mathemetically and the plots and records are, at the time of writing, practically ready for despatch.

51. The area has been plotted on 1,705 sixteen-inch sheets, and 52 two-inch sheets; the last are to form the besis of the Thana maps.

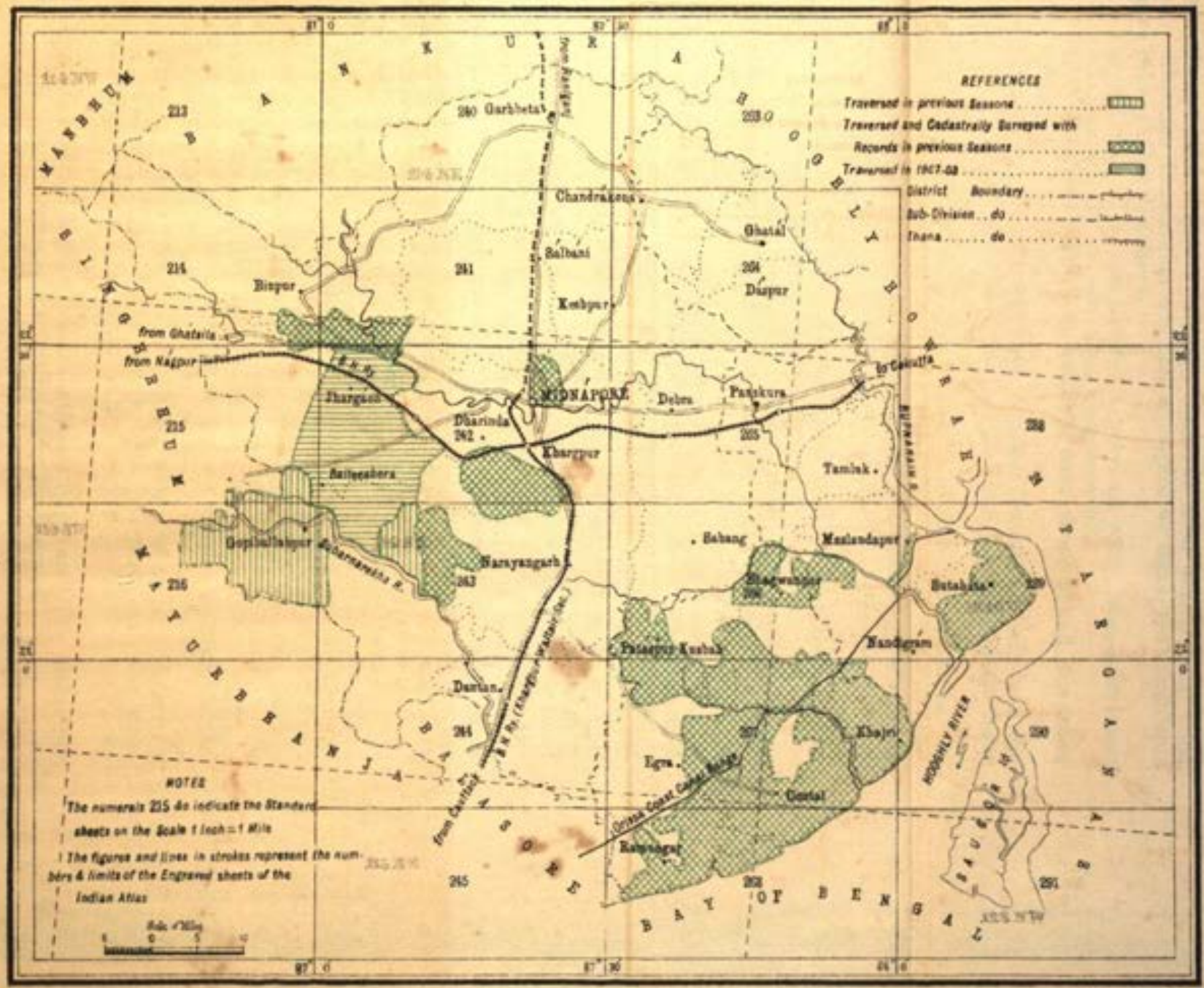
Midnapur District.

Traverse Survey.

52. The Jhagram and Chiara Estates, falling in thanas Jhagram and Gopiballabpur respectively, covering an area of 210·39 square miles were traversed for cadastral survey in the same year.

BENGAL SURVEY.

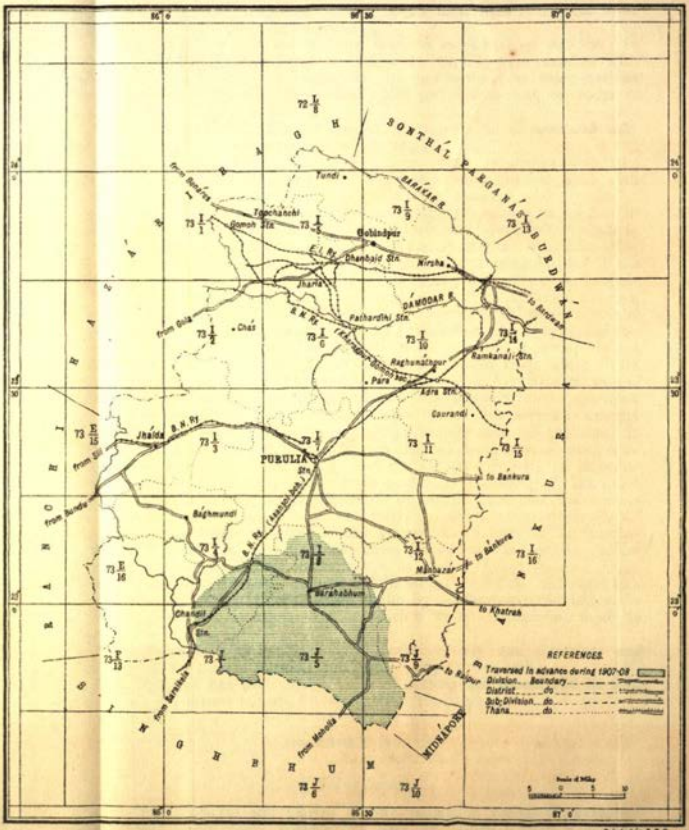
1907-08. INDEX TO THE CADASTRAL SURVEY IN DISTRICT MIDNAPORE No. 5 PARTY



BENGAL SURVEYS

INDEX TO THE TRAVERSE SURVEYS IN DISTRICT MÁNBHUM

1907-08. No. 5 PARTY

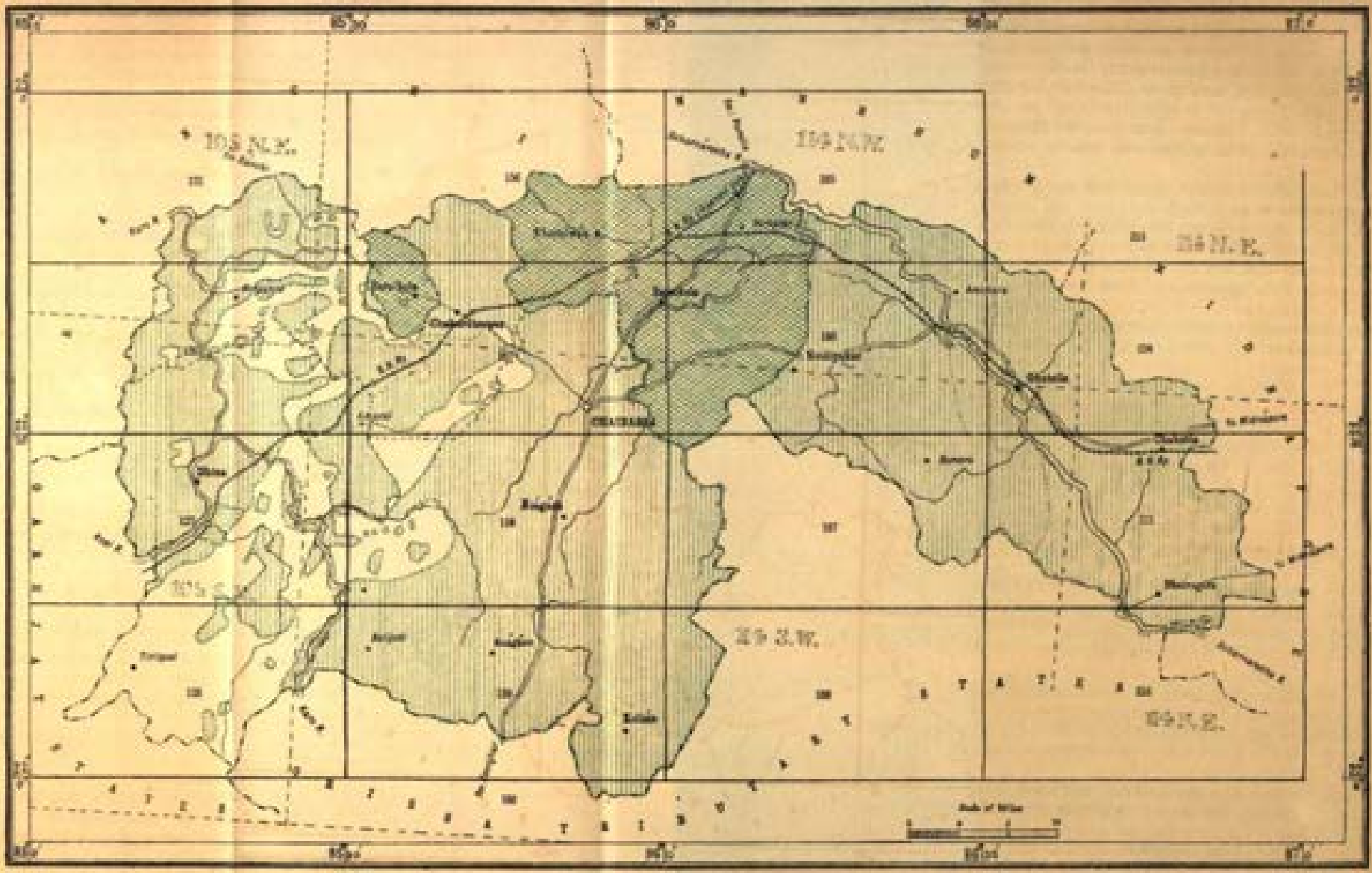


NOTES.- The Longitudes are referrible to the Greenwich Meridian.

The numbers 73 3/10 &c., indicate the 16'X15' Standard sheets on the Scale 1 inch = 1 Mile.

BENGAL SURVEY

INDEX TO THE CADASTRAL SURVEY IN DISTRICT SINGHBHUM.



REFERENCES

State ..... Boundary .....
District ..... do .....
Political State ..... do .....
Thana ..... do .....

NOTES.

The figures and lines in yellow represent the numbers & limits of the Engineer sheets of the Index Atlas

REFERENCES.

Traversed and cadastrally Surveyed during previous Seasons
Traversed during previous Seasons
Traversed during 1907-08 ..

NOTES.

The numerals 113, &c., indicate the Standard sheets on the Scale 1 inch = 4 Miles

53. In spite of a considerable portion of the area surveyed being covered with jungle the area embraced 595 villages.

54. The demarcation was carried out by a kanungo appointed by the Collector; in open country it was well done, but in the jungle it was, not unnaturally, defective. The inhabitants gave a reasonable amount of voluntary help.

55. The health of the establishment was very fair.

56. The origin used was the intersection of North Latitude 22° 30′ with East Longitude 87° 30′

57. Twenty-seven azimuths were observed and the mean magnetic variation is 1° East.

58. The subtense bar was used occasionally.

59. The system of marking survey stations was mainly that adopted throughout Bihar. In all there were 5,392 marks embedded; of these 1,084 are trijunction stones, 3,915 earth on cylinders, 141 galvanized cylinders (used for satellite stations on the outer limits of the area), 228 wooden pegs, 23 country stones and one mark cut on a rock *in situ*. The first two kinds of marks were adopted in places where the others were unsuitable, and the stones were marked as in Ranchi.

60. As the plots had to be sent in batches during the field season to the Settlement Officer (Mr. Hodgson) it was found necessary, so as to avoid, as far as was possible, the chances of linear errors which would have delayed the issue of the plots, to use two chains of different lengths.

61. Two great trigonometrical stations were connected with and the traverse work compared with the triangulated distances, averaged in error 4·7 feet per linear mile.

62. The work was plotted on 664 sixteen-inch and 15 four-inch sheets. All computations are complete, and only a little binding remains to be done.

Singhbhum District.

Traverse Survey.

63. In the Bengal Government's Notification No. 2634T.—R., dated the 29th October 1907, orders were issued for the survey of the following villages, which in area cover 14·18 square miles and fall in the tenure of Babu Abhiram Taung, in Thana Monoharpur:—Duribuli, Nandapur, Manharpur, Dukurdih, Patharbassa and Sarigidi.

64. The country is very rough and jungly and the frequent use of the subtense bar was necessary.

65. The preliminary demarcation was not good.

66. The origin used for the rest of this district, viz., the intersection of North Latitude 22° 30′ and East Longitude 86° was adopted.

67. Two azimuths were observed; the mean magnetic variation is 1° East.

68. The health of the establishment was fair.

69. The villages were plotted on 18 sixteen-inch sheets and on 1 two-inch sheet and these are about to be sent to the Settlement Officer.

70. The work proved well and is connected with our former work in the district.

71. In all there were 339 stations embedded. Of these 13 are trijunction stones, 321 stone prisms and 5 wooden pegs.

Manbhum District.

Traverse Survey.

72. The programme comprised the traverse survey of Pargana Barabhum and coverd an area of 638 square miles. More than half of this area consists of hills with a maximum height of 3,060 feet; the remainder comprises undulating plains; the country is wild and the scenery is, in places, magnificent.

73. Demarcation by the inhabitants was conspicuous by its absence; although at a later stage some help was given, the attitude of the people was almost hostile.

74. The health of the establishment was good; two men died, but their deaths were probably due to general debility caused by previous service in Ranchi.

75. The origin adopted is the intersection of North Latitude 23° 30′ with East Longitude 86° 30′. All the longitudial values of stations of the adjoining district of Singhbhum (closed with old values), as well as those of all great trigonometrical stations connected with, have been reduced by 2′ 27·18″ so as to bring them into terms of the latest value of the Madras Observatory.

76. Four great trigonometrical stations were connected with; the average error per mile by traverse, compared with that per mile by the traingulation, is 10·98 feet. Dalma hill station (3,060 feet) is within reasonable distance of the Bengal-Nagpur Railway, and seems to afford possibilities for a small hill resort; it would be very accessible from Calcutta and the vicinity is healthy.

77. One hundred and five azimuths were observed and the mean magnetic variation is 1° 15′ East.

78. The subtense bar was frequently used and in the hilly portions line clearing was exceptionally heavy.

79. In all there are 13,998 theodilite stations in the area; these were marked with 1,074 stone prisms (in open tracts), 8,361 local stones (in hilly country), 3,081 baked earthen cylinders, 1,130 wooden pegs and 352 marks cut on rocks.

80. Two chains of unequal length were used in all main and sub-circuit work.

81. The area is mapped on 956 sixteen-inch and 20 two-inch sheets. Most of them have already been sent to the Settlement Officer and the balance will follow shortly. A certain amount of binding work remains to be completed; this will be finished before the field is taken again.

82. Barabhum Pargana was dealt with in the Revenue Survey of 1865-66, but village boundaries were not surveyed; as far as possible then, with the help of lists of villagers supplied by the Deputy Commissioner, present possession boundaries have been traversed.

PART II (*a*).—TOPOGRAPHICAL SURVEYS.

DISTRICT KHULNA (SUNDERBANS).

Traverse Survey.

83. The programme, which coincides with the Topographical programme reported in paragraph 92 *et seq.* consisted of the completion of the survey of the Government Reserved Forests in the Khulna (Sunderbans) on the 2″ scale, and the survey of Lot 165 of district Khulna on the 4″ scale. The area traversed was 1,311 square miles, of which 310 represent water. The remainder consists of forest land intersected by innumerable *khals* or water channels.

84. The camp took the field on October 28th, and started work, with Rampal as head-quarters, on the 16th November 1907. The field season closed on April 10th, 1908.

85. No great trigonometrical stations were connected with, as there were none in or near the area; all attempts at connecting with the work of seasons 1904-05 along the Haringhata river failed, as the old stations could not be located. As the traverse work proved well the co-ordinates were continued from the work of the previous season, which was connected with the East Coast Series.

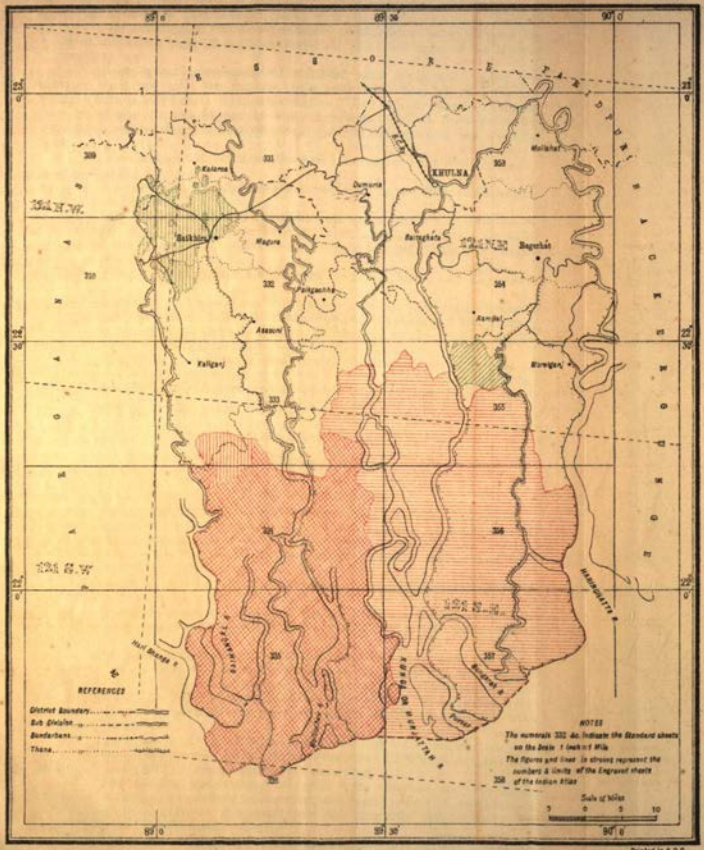
86. Seven thousand nine hundred and fifteen new theodolite stations were used; of these 3,398 were trunks of trees (the tops of 260 were encased with galvanized iron) and the remainder, 4,517, were pegs.

87. Two hundred and twenty azimuths were observed and the mean magnetic variation was deduced from them and found to be 1° 7′ 42″ East. I do not assign much value to this result and the magnetic survey party has not yet observed in this tract.

88. The system adopted in previous seasons, *viz.*, that of traversing rivers and streams by zigzags, distances being obtained by the subtense bar, was

BENGAL SURVEY.

1907-08 — INDEX TO THE TRAVERSE AND TOPO SURVEY IN DISTRICT KHULNA — No 6 PARTY

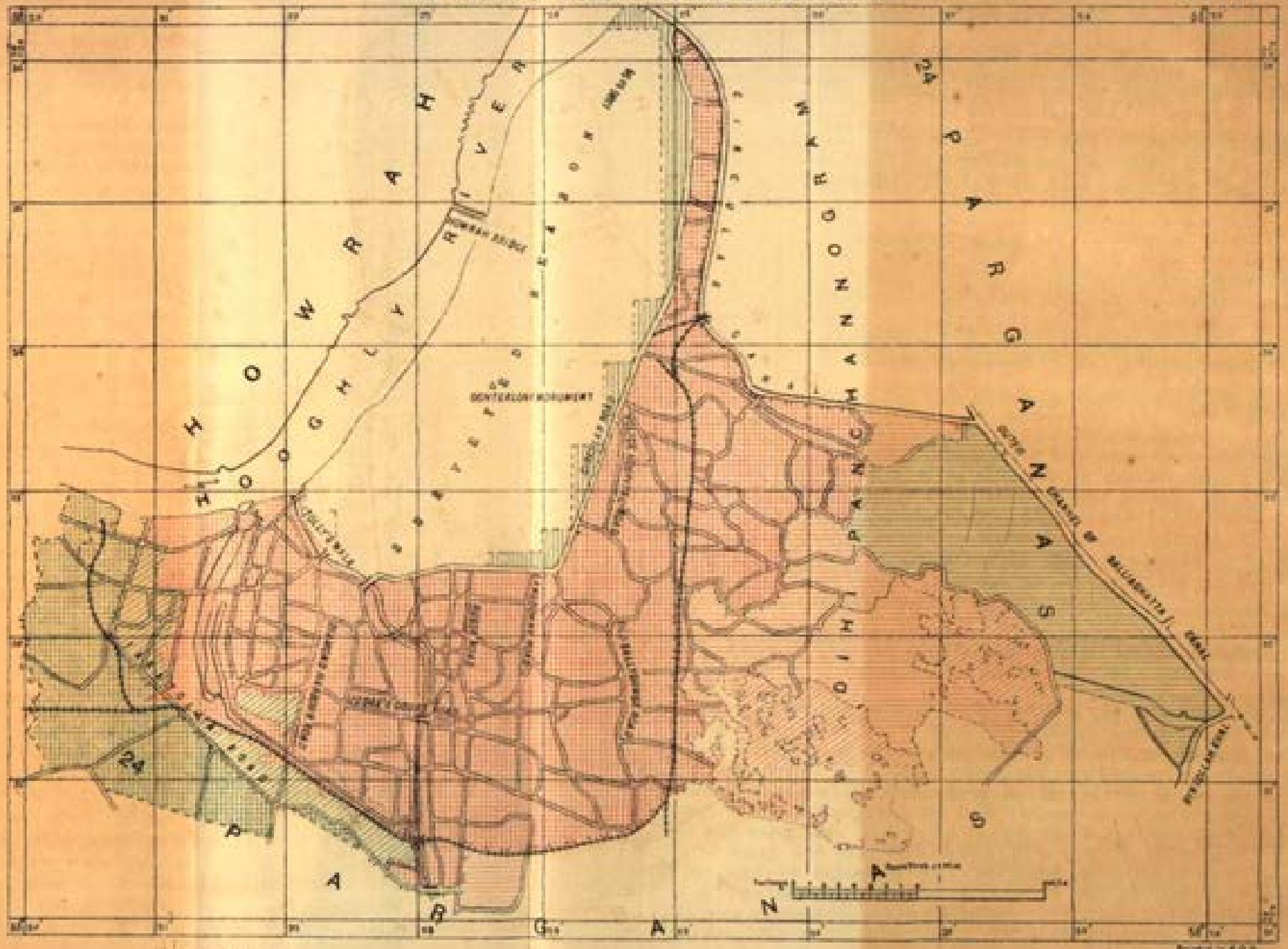


Printed in S.O.O.

Cadastrally Surveyed in Season 1905-06 .....
Traversed in Season 1907-08 .....
Topographically Surveyed previous seasons .....
do do 2 inches to 1 Mile 1907-08 .....
do do 4 inches to 1 Mile 1907-08 .....

INDEX TO THE SURVEY OF THE TOWN OF CALCUTTA AND ITS SUBURBS

1907-08



Printed in U.S.A.

continued. The results proved well. In all there were 1,752 linear miles of new chaining.

89. The flotilla employed on this work consisted of 2 steam launches 2 flats and 36 country boats. All fresh water and all food had to be carried, for the whole establishment (about 500 men). One boat foundered in nine fathoms of water in a storm, but the occupants were saved, although they lost all they had with them.

90. The difficulties experienced in previous seasons were encountered, but in a much smaller degree. This was partly due to the establishment having become more accustomed to the circumstances attendant on work in the Sunderbans.

91. Cholera carried off six men and there were six other deaths from fever and dysentry. On the whole the establishment kept good health; this was perhaps due to the streams carrying more fresh water than those met with in previous seasons.

Topographical Survey.

92. The area referred to in the preceding paragraphs was topographically surveyed on the 2″ scale (excepting Lot 165). The maps fall on 41 sheets and cover 1,257 square miles.

93. One thousand one hundred and nineteen linear miles of check survey were run and, in addition, 13 blocks were re-surveyed. The work checked was found to be well done.

94. Trace maps of the entire area have been prepared for the Deputy Conservator of Forests.

95. Lot No. 165 was traversed and topographically surveyed on the 4″ scale at the request of the Settlement Officer. The area was 54 square miles and it adjoins the work reported on in my last report. Four hundred and sixty-two new theodolite stations were used, and these were marked with 1 *pucka* pillar, 6 galvanized iron cylinders and 455 pegs.

96. The area is comparatively high-lying and out of the 54 square miles only two represent water. Fifty-eight linear miles of check survey were run with excellent results.

97. The Settlement Officer has been provided with a trace map of the area.

98. The survey of the Sunderbans forest reserves has now been finished and this camp is being broken up; it has been a work of very great difficulty accompanied by considerable danger. This is the first accurate survey made in this area and for various reasons it would be advisable that a special report be published; this I hope to be able to take in hand shortly and the report will be submitted to the Board of Revenue, in due course. It will be sufficient to say here that the completion of the work reflects the very highest credit on the whole establishment employed and particularly on Mr. A. W. Smart as the officer in charge of No. 6 Party, and Mr. P. F. Delaney as his chief assistant. Although food and water have had to be carried for several seasons to an establishment of about 500 men, it is pleasant to be able to record that not a single man has died by failure in this most intricate *bandobast* and that only on one or two occasions has any member of the establishment been reduced to anything approaching a serious shortage of supplies. The Military Hospital Assistant, Roshan Ali is deserving of very special mention and I hope that the Board will see its way to recommending him for special promotion or for some suitable reward for his zeal and efficiency under most trying circumstances.

PART III.—REPORTS ON MISCELLANEOUS SURVEYS.

Calcutta Surveys.

99. The work done during the year falls under the following heads:—

(*a*) Preparation of fair maps of the suburban area on receipt of attested records.

(*b*) Preparation of Revenue maps in skeleton form by sub-divisions and grand divisions of the Panchannogram Estate.

(*c*) Completion of records so far not despatched to the Collector for attestation purposes.

(*d*) Settling boundary disputes outside the Calcutta Municipality and the giving of attention to miscellaneous references regarding boundaries.

(*e*) Completing the survey required for the Land Acquisition operations going on under Mr. Duval, I.C.S. This includes the demarcation of holdings both inside and outsides municipal limits as well as the demarcation of the holdings in 1,400 bighas laying within municipal limits. The last mentioned area was not included in the original estimates.

(*f*) Preparation of maps of the sheets drawn up to margin of the area outside municipal limits for the Chief Engineer to the Port of Calcutta.

(*g*) Tracing old maps of Simm's survey for the Collector of Calcutta; the traces were required to save the old maps from total destruction.

(*h*) Surveying the area known as the square mile, situated in Dhappa, and the area acquired by the Corporation outside and adjacent to the square mile.

(*i*) Preparation of a wall map on the scale of 16" to 1 mile by municipal districts of the suburban area.

100. It was hoped that during the year considerable way would have been made in the revision survey of Calcutta town; unfortunately orders have not been received to take up this work; the case has been under discussion for many months; sometime back I sent to the Board a detailed note on the existing situation of the Calcutta Surveys; the note was intended to show how very miscellaneous and intricate this section of Bengal Surveys had become, and was also intended to show what further expenditure was absolutely essential if full results were to be obtained from the work already completed.

No such operations such as those carried out can have any lasting value unless the following items are arranged for:—

(*a*) The publication of maps prepared.

(*b*) The maintenance of those maps, both fiscally and topographically.

(*c*) The maintenance of all records prepared.

Previous surveys of Calcutta have met with disapproval within a short time of their completion for the following reasons:—

(*a*) They have been mainly topographical and not fiscal as well as topographical maps.

(*b*) Records have been conspicuous by their absence or by inaccuracy or insufficiency in detail.

I will take this opportunity of placing on record the fact that the work which we have recently done in Calcutta will be of little value in the very near future unless provision is made to meet the points I have mentioned in the earlier part of this paragraph; if the provision is not made it cannot be said hereafter that a remedy for the recurring re-surveys of Calcutta has not been pointed out by the surveyors to whom Government entrusted the work we have all but completed in the suburbs of Calcutta. In the past surveyors have been blamed for producing maps which were only found to be of a temporary advantage. No work in Calcutta hitherto has been carried out in anything like the detail of that now under completion, and the warning conveyed in this paragraph applies with very much greater force to-day that it would have applied in the past. I can only hope that the Calcutta Corporation will see its way to prevent the expense of re-surveys in the future by insisting on a proper maintenance scheme at a moderate annual expenditure; for I firmly believe that the yearly cost of maintenance will be less than the interest calculated at the existing borrowing rate of the Calcutta Corporation, on the capital involved in the work now reported on.

The remarks above apply with equal force to both the suburban and the town areas of Calcutta, and for that matter, to any large town in India or elsewhere.

101. The only traverse work done was that involved in the splitting up into minor blocks of the area under acquisition by the Port Commissioners, and the work required to carry out item (*h*) of paragrah (99) above.

102. The detail survey done was as follows :—

(*a*) Boundary correction in the Punchannogram made necessary by attestation proceedings.

(*b*) In the area exterior to municipal limits surveyed on the scale of 32″ to 1 mile, it was suggested by Mr. R. B. Smart sometime back that the detached lands should be marked with stones ; the Collector first vetoed this proposal on the score of expense, but was later on convinced that the expenditure would be warranted by the result ; some progress has been made during the year under report, and its is hoped to complete it shortly after the rains cease.

(*c*) Two thousand seven hundred and seventy-three bighas were surveyed for the Port Commissioners on the scale of 50 feet to 1 inch.

(*d*) The Dhappa work embraced the detail survey of 1,715 acres.

Demarcation.

103(*a*) The demarcation of the whole area of the suburban survey was completed by the end of May, but all the records and maps have not yet been made over to the Special Land Acquisition Officer (Mr. Duval).

(*b*) In the Dhappa area much trouble has been experienced by the Corporation in pointing out its boundaries ; the difficulties of the Corporation were reflected on the Surveyor, and the work was completed much later than it should have been. It is very essential that all land acquired should be properly marked with permanent boundary pillars at the time of acquisition ; if this had been done the difficulties mentioned above would not have been experienced.

Comparison of old and new maps of the Port Commissioner's acquisition area.

104. The acquision notification gives the names of whole and portions of villages to be acquired ; in order to identify these a 4″ congregated plan was made from the Revenue Survey volumes, and the amins were ordered to keep separate *khasras* of each village as given by the owners ; the result was far from satisfactory, and it may be remarked here that when the cadastral survey of 24-Parganas is taken up difficulties in regard to village boundaries must be expected because the zamindars pay much respect to *tauzi*-holdings and little or none to village limits ; recent changes in the Bengal Tenancy Act will doutless reduce the troubles anticipated here but I doubt if those changes will minimize the troubles of the traverse officer to any great extent.

Boundary disputes.

105(*a*) In the suburbs the work of adjusting these was completed in the last year, but owing to appeals further adjustment was found necessary ; again applications were often received for reviews of judgment ; these latter have been a source of considerable worry.

(*b*) In the Port Commissioner's acquisition area there were a certain number of disputes. These were shown on the trace made over to the Land Acquisition Officer, and have been presumably dealt with by that officer.

Attendance of owners.

106. The interest of owners in our work has apparently increased ; this was anticipated in my last report, and it is very satisfactory to find that such copies of the maps made, as we have been able to issue, have been bought up with avidity. The sales to be expected from the published maps, when

they are published, will be greatly in advance of the sales resulting from previous surveys.

Area calculation.

107. The work done inside the municipal limits to be acquired by the Port Commissioners is as follows:—

The areas of the holdings of 1,440 bighas (480 acres) were extracted. The extraction was very complicated owing to the demands of Mr. Duval, caused doubtless by the high value of the interests with which he is dealing. In 654 holdings, 1,524 minor divisions were found necessary; in these minor holdings the areas of 4,092 huts, walls, drains etc. had to be calculated. If these details show nothing else, they emphasize the intricacy of the acquisition now proceeding.

Outside the municipal area of the Garden Reach and South Surbarban Municipalities, the areas of 2,427 holdings were extracted for the Port Commissioners. These holdings again had to be greatly subdivided.

Fair Mapping for the Corporation.

108. Out of 397 maps, 297 are ready for the press and the balance will be ready very shortly. At present there are no orders regarding the publication of these maps, but it is hoped that there will now be little further delay. Constant applications are received for copies of the maps, but these can seldom be supplied; the demand for the maps is certain to be considerable, and this is only to be expected because they are the first real fiscal and topographical maps that have been made of this area.

Fair Mapping of Revenue Maps.

109. Last year I reported that there were 469 of these maps to be dealt with on the 50-foot scale, and 29 on the 32-inch scale; the former is now increased to 480. The reason is that the 50-foot sheets are to be in skeleton form whereas the 32-inch maps must show full details. In addition an extra 32-inch sheet has been produced by the location of extra detached lands. The total number of sheets is therefore 510 and to these must be added the 14 index maps of the several grand and subdivisions of the Panchannogram Estate. We must, therefore, be ready for the printing of 510 sheets in colours and 14 in black.

Of the 510 sheets all are drawn and about half have been examined, and the 14 index maps are at present in hand.

Orders regarding the printing of these maps should be issued at once because it will be necessary to obtain the paper on which they are to be printed from England, since the size we require is not stocked in India except in paper not suited to these maps.

Wall Map of Calcutta.

110. The so-called wall map is really a 16" map of the suburbs, it was commenced last year and according to the wishes of the Corporation at that time the pentagraphing is completed; the Corporation now wants further details shown and so 12 of these maps will require further pentagraphing work. It is a pity that the first wish of the Corporation could not be adhered to, or that its secondly expressed wish could not have been expressed originally; a result of the change is that delay will occur in production of these maps.

Attestation in the Panchannogram Estate.

111. The 27 *khasras* left over at the end of the last year were received back from the Attestation Officer in due course, and final comparison has now been made with the maps and the municipal registers. Owing to the difficulties of attestation, a special officer was employed. The last *khasra* was received on the 6th June 1908.

112. Mr. R. B. Smart, who has been in charge of the work detailed above throughout the year, suggests that the limits of all holdings in Subdivision S,

BENGAL.

INDEX TO THE CADASTRAL SURVEY IN DIST MONGHYR

1907-08 No 4 PARTY



NOTES

The numerals 175 &c indicate the Standard sheets on the Scale 1 Inch = 1 Mile.

The figures and lines in strokes represent the numbers & limits of the Engraved sheets of the Indian Atlas

Scale of Miles.

Printed in S. O. G.

Topographically surveyed during 1907-08 .....

Cadastrally surveyed with record during previous seasons .....

Topographically surveyed during previous seasons .....

Traversed in 1907-08 .....

Traversed during previous Seasons .....

District ... Boundary .....

Sub division ... do .....

Thana ... do .....

Division 5 of the Panchannogram Estate should be marked with stones. It was in this area that attestation troubles were most serious. I approve of Mr. Smart's suggestion, and will estimate for the work if required to do so.

Singhbhum (Dalbhum)-cum-Mourbhanj Boundary.

113. The work required to be done consisted of such survey work as was necessary to enable Mr. J. Reid, I.C.S., Settlement Officer of Chota Nagpur, to decide, as Boundary Commissioner, a dispute, of several years' standing, between the Dalbhum Syndicate and the Mourbhanj State.

114. Traces showing portions of about 17 miles of the disputed boundary as demarcated sometime back by Mr. Craven were received, but unfortunately by reason of absence of *data* common to Mr. Craven's work and that done by us in the traverse (for cadastral survey) of Dalbhum, it was found to be impossible to compare Mr. Craven's boundary with that of either of the disputing parties. Mr. Reid then asked us to place the topographical boundary by the last survey on the 16″ village plots used in the Dalbhum cadastral survey; as the topographical boundary was on the 1″ scale, this plan had to be discarded. The only way we could give any help to the Boundary Commissioner was to traverse the claims of both parties, stations being embedded where possible, close to such of Mr. Craven's marks as were found. Mr. Reid will then settle the dispute on the basis of the resulting traverse plots, being guided when possible by the 1″ topographical map and Mr. Craven's plans.

115. Considerable delay took place in the Dalbhum Syndicate pointing out its supposed boundary; it was stated by Mr. V. Pigott, the Manager, that since the Mourbhanj authorities had magisterial powers in their own lands, and that since they had pointed their own boundary out in such a way that Mr. Piggot would have to cross their boundary to mark what he considered to be his own, he would be placed in a very difficult position if he attempted to demarcate his boundary. The result was that the linear survey of a boundary about 18 miles long took from the 6th February 1908 to the 17th April of the same year to complete; it is difficult to blame anybody for this delay and I may state here that we found Mr. Pigott ready to give all reasonable help as soon as he was able to demarcate his claim.

Mining claims in British Sikkim.

116. At the request of the Political Agent a Surveyor and squad were deputed to make a survey of the limits of mining claims of Mr. Gleadowe Newcomen, C.I.E., and Messrs. Burn & Co. of Calcutta. The necessary maps have been prepared and the cost is borne by deposits from the claimants.

Ranchi Municipality.

117. The necessary traverse, for a detail survey by the Settlement Officer, was carried out during the year; the work commenced on May 23rd and was completed in a little over three months.

118. The area involved is 6·7 square miles and the plots fall on 32″ sheets, and on one 2″ sheet; this last is simply an index to the 32″ sheets.

119. Six hundred and eleven new theodolite stations were used, 255 being iron nails (2″ square heads), 276 baked earthenware cylinders, 77 country stones and 3 marks on rock *in situ*.

120. The cost has been met from the budget grant for the operations for the whole district of Ranchi.

Monghyr District.

Jamalpur Hills.

Topographical Survey.

121. One hundred and eighty-three square miles of the above hills were surveyed in detail on the 2″ scale to supplement Standard Sheets No. $72\frac{5}{7}$, $\frac{5}{7}$, $\frac{5}{11}$ and $\frac{5}{11}$. The area falls in thanas Monghyr, Jamui, Kharagpur and Surajgarha.

122. This small tract of country is most inhospitable; what water exists, except certain hot springs, is generally unfit to drink; there are very few inhabitants, the hills are of quartzite and very unpleasant to climb over even for those who wear boots, and fever of a very virulent type exists. Beyond timber cutting (chiefly male bamboos) and slate quarrying, the hills seem to be of little value economically.

Two khallasies died of fever and the whole establishment had to be frequently changed. The origin of the fever appears to be the decay of leaves in such water as exists, and it is particularly noticeable just after the bamboos begin to shed their leaves; it almost seems as if the decayed bamboo leaves have a peculiar effect on the water into which they fall.

123. It is interesting to note that the inhabitants of these hills are said to know of a certain antidote for snake-bite. I made several efforts to obtain the prescription two years ago, but without success. It is said that the cure is kept secret and is not allowed to be divulged to outsiders.

124. The fair mapping of the area will be done in the Bengal Drawing Office.

125. The whole area was triangulated and traversed in the year under report. The detail work was checked by 172 *in situ* fixings and by 15·25 miles of chain "*partal*"

126. Considerable credit is due to Mr. J. H. Johnson, Sub-Assistant Superintendent, for the way in which he carried out the work although suffering constantly from fever himself.

127. The Settlement Officer of Bihar has been supplied with traces showing water courses, paths and the limits of cultivation. He required these traces to help him in the attestation of the area.

Monghyr District.

Ganges Diara.

128. An area of 42·5 square miles, lying between the area previously surveyed and the southern high bank of the Ganges, lying in thana Surajgarha, was traversed for cadastral survey at the request of the Settlement Officer of Bihar. The 16″ plots were not in the Settlement Officer's hands until April 1908, and the Settlement Officer decided that it was then too late to carry out the cadastral survey of the area. It is probable that the area will have to be re-traversed early in the next field season. No blame can be attached to anybody for this failure; it is simply an example of what must be occasionally occur in the surveying of large river beds.

Shahabad District.

Re-laying the boundary between Bhedia and Taufir Bhedia (Pargana Bhojpur).

129. This work was done at the request of of the Collector of the district. The late Maharani of Dumraon claimed that 500 bighas of land of Taufir Bhedia (temporarily-settled) fell within the limits of Bhedia (permanently-settled) according to the Revenue Survey of 1845 and she wished to avoid assessment for those 500 bighas.

Mahal Bhedia comprises the Revenue Survey villages of Dulha, Gangauli, Mohanpur and Kharhataur and these touched on the Ganges in 1845; the Ganges subsequently moved eastwards and land formed alongside the four villages; this land is Mahal Taufir Bhedia and it has been assessed from time to time and settled with the Dumraon Raj.

130. The area traversed was 7·6 square miles and in it there were 168 new theodolite stations, of which 37 were marked with stones 128 with clay cylinders and 3 with pegs.

131. The expenditure is met from a deposit made by the Dumraon Raj.

Monghyr District.

Demarcation of the boundary between parganas Haveli and Sakrabadi.

132. This work was done at the request of the Commissioner of the Bhagalpur Division; the Commissioner was appointed arbitrator between the

disputants (the Maharaja of Darbhanga and the Raja of Báneli). The demarcation to be done was that according to the award of the Commissioner.

133. The work was supervised by a European Assistant in the presence of representatives of both parties and 273 permanent pillars have been erected on the ground. They now mark a boundary which had been in dispute for about sixty years.

134. The Commissioner was supplied with three copies of the maps (8″=1 mile) of the boundary and of the field-books. One he keeps as a record in his own office, and one set was given to each disputant. Copies were also sent to the Settlement Officer of Bihar to enable him to show the final boundary on the cadastral sheets.

135. The expenditure has been met by deposits.

Hooghly District.

Traverse Survey of the Chinsura Khas Mahal.

136. An area of 1·05 square miles was traversed (for detailed survey on the 32-inch scale by the Settlement Officer of Bihar). It consists mainly of lands covered with houses.

137. Three hundred and forty-eight theodolite stations were embedded, for 321 stations bricks were used, and for 27 iron pegs; the latter were placed along the municipal boundary. All these stations should later on be replaced by masonry pillars.

13. Three azimuths were observed and computed.

139. The 32-inch plots, 5 in number, and an 8-inch rough plot, have been despatched to the Settlement Officer of Bihar, who is to undertake the cadastral survey.

140. The original estimate was exceeded because the traverser sent was idle in Chinsura for 14 days awaiting the gazetting of the area concerned for survey. Technically this enforced idleness was correct, but I think that it might have been avoided, since it was very unlikely that the inhabitants would have raised objections to a traverse survey, which in no way affects possession.

Nepal-cum-Purnea Boundary.

141. The Kosi river enters *British* territory at a point close to the trijunction of Nepal, Bhagalpur and Purnea, and owing to the extreme uncertainty of the movements of the river the Provincial boundary near this point has for many years past been a source of trouble; as fast as marks have been put down by surveyors, they have been swallowed up by the river and the constantly recurring work of many years past has been wasted. Some three or four years ago I suggested to the Commissioner of Bhagalpur Division that constant re-demarcations were a waste of money, and the only way to prevent them was a change in the boundary by which we should cede to Nepal a few square miles of sand and water. I still hope that some such arrangement will be found possible.

142. During the last cold weather reference pillars to *pucka* pillars Nos. 9, 10 and 11 were fixed and embedded. For the present the Collector of Purnea thinks that no further action should be taken and I agree with him that it will be best to wait until the Kosi river shows more tendency than it does at present to adopt a semi-permanent bed in this neighbourhood or until the boundary can be compromised.

Patna District.

Relaying the boundary of the Government Estate, Chaparsan 1250.

143. At the request of the Collector of Patna the boundary of Chaparsan, 1250 with Raspur Patasia was laid down according to the Ganges Diara Survey of 1865-66; and the boundary of Chaparsan 1250 with Mahamadpur (pargana Gyaspur) according to the Revenue Survey of 1842-43.

144. It was found that most of Chaparsan 1250 was under water, and what actually existed consisted of two sand islands; all that remained of Mahamadpur was a narrow strip of sand on its north side.

Bengal Drawing Office.

145. The work of the office falls under the following main sections :—

(1) General (supervision).
(2) Standard mapping which includes District mapping on the scale of 4 miles to 1 inch.
(3) Traverse charts.
(4) Thana and Trijunction Mark Maps.
(5) Map reproduction.
(6) *Badar* (map correction).
(7) Map record.

Standard Mapping Section.

146. This section has been doing work for Bengal and Eastern Bengal; its total outturn has been very satisfactory indeed. Out of a total of 20 standard maps (scale 2″=1 mile), consisting of 50 sections, submitted for publication during the year, 14 maps belong to Bengal; these are as follows :— Nos. $72\frac{K}{8}$, $\frac{N}{4}$, $\frac{N}{7}$, $\frac{K}{8}$, $\frac{O}{1}$, $\frac{O}{5}$, $\frac{O}{8}$, $79\frac{C}{8}$, $\frac{C}{15}$, $\frac{C}{13}$, $\frac{C}{14}$, $\frac{G}{1}$, $\frac{G}{4}$, and $\frac{G}{6}$. In addition sheets Nos. $72\frac{O}{1}$, $\frac{O}{6}$, $\frac{O}{7}$, and $\frac{N}{11}$ are in hand and good progress is being made on them. Sheet No. $72\frac{K}{11 \text{ and } 15}$ (old numeration No. 203) is in hand and awaits the inclusion of the block of hills south of Monghyr Town; the detail survey of those hills was done during the year under report, and on account of stress of work induced in the Bihar Party (No. 4) owing to the proposed reorganization of Bengal Surveys, I have transferred the 2-inch fair drawing to the Bengal Drawing Office so as to avoid unnecessary delay in the completion of this sheet. It should be noted however, that after publication, the sheet will not show all the hills which fall on it, because only the hills in the northern portion have been topographically surveyed by us; this point is of importance to those who, hereafter, carry out supplementary or re-survey operations in this district.

147. In addition to the above work, the section has coloured, for the head-quarters office of the Survey of India, the fiscal limits and cultivation on 31 unpublished proofs of 16 standard sheets; it has carried out the final examination and correction of 13 unpublished proofs of 6 standard sheets, and one district map, fiscal limits being at the same time coloured on the latter. Ninety-seven published proofs of 70 standard sheets and 13 district maps have been completely coloured for use in the office. Lastly small additions and corrections have been made on 8 published proofs of 2 standard sheets and 2 district maps.

148. The following miscellaneous work has been dealt with :—

(*a*) District index maps of Shahabad and Manbhum have been prepared.
(*b*) A coloured *mujmili* of the Sarkari Hata Estate has been made for the Deputy Commissioner of Hazaribagh.
(*c*) A comparative map showing the boundaries of villages Ramdiri and Sihawan, according to the Revenue, Diara and Cadastral surveys, has been produced for the Collector of Monghyr.
(*d*) Two sets of specimen thana maps have been prepared at my orders, in connection with a scheme, referred to in paragraph 14 of this report, for the improvement of thana maps of the province.
(*e*) Three maps for the annual report of the Director of Land Records have been prepared.

149. The future of the Standard Mapping Section of the Bengal Drawing Office is somewhat uncertain. We are on the verge of the whole office being transferred from the professional control of the Surveyor-General to that of a Local Superintendent working under the Local Government only, and, as the Surveyor-General publishes standard maps, it is probable that he will not publish them of areas in which any but his own surveyors are employed. In accordance with the orders of the Government of India it has been decided that standard maps shall not, in the future, show village boundaries; on its being pointed out to the Surveyor-General that these boundaries were essential of local requirements, the Surveyor-General decided to superprint them on published

standard sheets if asked to do so by the Bengal Government and if provided with skeleton maps on his own projection by the Local Government. Government was advised that it would produce its own 1-inch maps of fiscal units (thanas) at small cost and therefore agreed that standard sheets need show no village boundaries. I am not, however convinced that superprinting, under certain circumstances, is not preferable to the production of Thana maps for areas not cadastrally surveyed on the modern system, but which have been recently topographically surveyed. Briefly what is about to happen is that the new standard sheets will meet with a very small local sale if Thana maps of the same areas are published before, or even after them, unless village boundaries are shown on the standard sheets. It is therefore easy to conceive a situation arising in which it may well be to a Local Government's advantage as well as to the advantage of the Government of India, that village boundaries should be superprinted on standard sheets. There is, however, the converse of the question to be considered and it is in the converse that Bengal is, at the present moment, most interested, for it would appear that many years will elapse before topographical establishments of the Survey of India will cover any appreciable area of Bengal. Where a cadastral survey executed on modern lines precedes a topographical survey, it is essential that Thana maps prepared locally be produced; these will show all local requirements, except inequalities of surface (hills). In such a case, after the standard sheets of the area in question are published, it will remain for the Local Government to decide whether it will transfer the hills from the standard sheets to its own Thana maps, or reject the latter, and have the village boundaries superprinted on the standard sheets. I have no hesitation in saying that it will be easier to transfer the hills from the Survey of India maps to the Thana maps and yet I know that this statement is open to challenge on the ground that any wholesale copying from other people's maps is reprehensible. I write the above with the utmost diffidence, and yet I feel that the subject is of sufficient importance to warrant plain writing to avoid misunderstanding; however I quote a few of the reasons which led me to the conclusions given above:—

(*a*) The nomenclature of village and other names adopted in Survey of India maps can never be as accurate as that used in maps which are the result of Survey and Settlement operations.

(*b*) Local requirements demand maps of fiscal units; miscellaneous requirements and those of the Government of India demand maps of squares of Latitude and Longitude.

(*c*) Local requirements call for the emphasis of many items not given prominence on topographical maps.

(*d*) It seems possible that the present scale of standard maps (1"—1 mile) may be reduced in the near future by half. Half-inch maps are too small for local requirements.

(*e*) Areas of thanas, etc., are no longer shown on standard maps.

(*f*) Topographically rivers will not be altered on Survey of India maps except after very long intervals of time. Unless the Survey of India will revise its maps on detail done by Local Survey Departments, from time to time, many standard sheets of Bengal will be obsolete almost before they are published. Bengal proposes to take steps to keep its large river surveys up to date and this consideration is of great importance.

(*g*) Uniformity in a province's maps is essential. Twenty-five years hence Bengal may expect a new set of topographical maps covering the whole province. Are we to wait so long for uniformity?

I admit that the above arguments are not insuperable and I have every hope that a compromise between India's and local requirements may be arrived at; a reasonable co-operation between local work done by professional methods and Survey of India work seems to be the correct procedure, for it is clear that local and Survey of India surveyors will, time after time, pass over the same ground. A topographical survey is of little use for fiscal purposes because the scale used is too small and enlargement is out of the question; a fiscal survey uses a large scale and if properly done its results, reduced to

ordinary topographical scales, compare very favourably indeed with the results given by the latter; it appears that the ideal situation, in cultivated areas, would be for topographical establishments to *follow* cadastral establishments and to simply survey hills on a small scale; it is not unreasonable to suppose that the combined result would give maps just as accurate as present day standard maps, and the saving in cost would be enormous; it cannot be expected that the compromise we should aim at will exactly follow the lines just sketched, but I think that it may be assumed that the direction of economical compromise must lie in the direction I have indicated for at any rate all areas now well under cultivation.

Traverse Charts Section.

150. This section has been increased somewhat during the year; its outturn has been 36 charts of Orissa and 43 of Bihar. Twenty-two other charts are nearing completion. The charts for Ranchi will be taken up early in the next year.

151. Traverse charts show permanent boundary marks which will be of use during topographical surveys which follow cadastral surveys; they are prepared according to orders issued by the Surveyor-General. The limits of charts are geographical and not fiscal and a marks serial is adopted throughout each unit, the numbering being done from the north-west corner of each chart. As we work by fiscal units it is very often impossible to draw the charts up to margin all round.

In addition to traverse charts we also prepare in the Bengal Drawing Office trijunction mark *mujmilis* by thanas, for the use of District Officers. The unit of the latter is fiscal, the serial numbering commences at the north-west corner of each map, and the scale used is 2 inches to 1 mile; the unit of the traverse chart is geographical, its numbering commences from its north-west corner, and its scale is, according to circumstances, $\frac{1}{2}$" or 1" to one mile. It will be conceived therefore that a duplication of work is entailed which could, I think, be avoided; the question is one very similar to that of the duplication caused by the publication of both Standard maps and Thana maps, and the two matters are being dealt with con-jointly.

Trijunction Mark and Thana Mapping Section.

152. Where standard sheets are prepared, the making of trijunction mark maps is easy because the sections of standard sheets are drawn on the 2" scale; of such maps two were made of thanas in North Bhagalpur. Where, however, standard maps are either not under preparation or are not sufficiently advanced to admit of traces from the 2" standard mapping being used, *mujmilis* reduced from the 4" rought plots used for the comparison of modern boundaries with Revenue Survey boundaries are used; of such maps those of 5 thanas (397 copies) of South Bhagalpur were produced and of 9 thanas (189 copies) of Purnea, thana Banki, (400 copies) of Cuttack were also dealt with. In addition 200 copies of the trijunction mark maps of 9 thanas of Ranchi were supplied to the Settlement Officer.

Thana Maps.

153. As in the case of trijunction mark maps, either 2" standard work or *mujmilis* may be used as basis of the map. Two thanas of North Bhagalpur were completed from standard maps; and 5 thanas of South Bhagalpur, 7 of Purnea and 1 (Banki) of Cuttack from *mujmilis*. Two hundred copies of each of the above maps were printed and supplied.

In addition 200 prints of each of 9 thana maps of Ranchi were produced.

154. For reasons which will be apparent from the remarks already made in this report on Standard Mapping, Traverse Charts and Trijunction Mark Maps, it will be clear that the future of Thana maps is somewhat obscure. There is, however, one point which can be dealt with at once and which I have taken steps to meet; except when compiled from 2" sections of standard sheets, our Thana maps have not been maps but "*mujmilis*"; there is no reason why this should be the case, and Settlement Officers will, in future, be supplied

with 2-inch plots which will eventually ensure the geographical positions of villages being shown on Thana maps. In addition notes have been prepared by which the Thana maps of the future will be made uniform in appearance and I hope that they will be found considerably more useful than those maps which we have hitherto published. Whether the existing situation of a duplication of work caused by both Standard and Thana maps being prepared can be compromised or not, it is possible for Government to be given colour printed maps of thanas instead of the makeshifts hitherto produced; if a compromise between Standard and Thana maps can be arrived at, and I hope it can, the time that I have spent on working out details for the future of Thana maps will not have been wasted.

Reproduction of Village Map Section.

155. This section has turned out considerably more work in the year than in the last.

156. *District Darbhanga.*—Has been finished, the 18,440 copies of maps left over from last year having been despatched.

157. *District Monghyr.*—Out of a total of 3,875 sheets (traced on 3,459 paper traces as the original maps were on thick paper), all tracing and examination work has now been completed. By the end of last year 34,880 copies had been reproduced and despatched, and, of the balance (34,300 copies) 15,140 have been dealt with during this year. In addition (*vide* paragraph 149 of last year's report) since ten extra copies of 422 traces were required, these have been re-vandyked and despatched during the year.

The work in North Monghyr would have been finished by now, had it not been found necessary to shelve it to make way for reproduction work of Purnea (to avoid delay in recovery operations) and Bhagalpur.

158. *Purnea.—Season 1887-1889.*—The programme consisted of 373 sheets on 372 paper traces of the Srinagar Banaili Raj lands; 20 copies of each trace being required, 312 traces have been reproduced with 6,240 copies and 5,420 copies of 271 traces were supplied during the year.

159. *Purnea.—(Season 1901-03).*—The programme consisted of 1,332 sheets which fall on 1,301 (and not 1,331 as was mentioned in last year's report) paper traces. All these have been traced and vandyked, 26,020 copies having been struck off; **12,860** copies were despatched during the year, making a total of **26,020** copies to date.

160. *Purnea.—(Season 1903-07).*—These maps are on their sheets and have been completed with the exception of five villages on six sheets during the year; the table below shows the number of copies issued during the year:—

Season 1903-04	...	...	...	...	5,905
„ 1904-05	...	...	...	...	221,933
„ 1905-06	...	..	...	...	83,550
„ 1906-07	...	...	...	...	300
			Total	...	311,688

161. *North Bhagalpur.*—In this area, including the Srinagar Banail Survey, there are 2,796 sheets for reproduction instead of 2,808 as mentioned in my last report; of these **434** will be reproduced direct from the original maps and **2,362**, *i.e.*, the balance have been traced on **2,312** paper traces. There are therefore **2,746** sheets and paper traces for reproduction, and 20 copies of each are required, **54,040** copies, made from 2,702 sheets or paper traces, have been printed and **50,480** copies supplied to date. Of this last number 3,830 copies were supplied during the year.

162. *South Bhaghalpur.—(Season 1905-06).* In all there are 2,278 sheets for direct reproduction; copy orders were received from the Settlement Officer, Bihar, and the whole work (**177,280** copies) was dealt with in the year under report. Ninty-nine topographical sheets on the 4" scale are excluded from the first figure given in this paragraph. Before orders to the contrary were received two or more villages on one sheet were vandyked on separate

plates; thus 2,254 sheets dealt with during the year required 2,409 plates for vandyking purposes.

163. *Ranchi.*—(*Season 1903-05*). Final figures for the number of sheets are for 1903-04, 1,209 and for 1904-05, 1,280; 20 copies of each are required.

As in the 1903-04, two or more villages were sometimes mapped on one sheet, the 1,209 sheets of that season have been vandyked on **1,296** plates.

In all, for this seasons work, **60** copies were supplied this year, 25,860 having been supplied previously.

Similarly the sheets of the 1904-05 have been vandyked on **1,324** plates and the requisite number of copies **26,480** have been printed. Last year 3,500, copies were despatched, and the balance (22,980 copies) have been supplied this year.

164. *Ranchi.*—(*Season 1905-06*). No work was done because of the urgency of other districts in which recovery was about to take place. The reproduction will shortly begin and will be completed rapidly as the sheets are well drawn.

165. *Sonthal Parganas.*—The index map of the district shows a complicated patch work of areas dealt with by different surveyors in different years; although no work was done during this year it will perhaps be well to refer here to the existing state of things in the Sonthal Parganas. Up to the end of last year 9,292 traces (covering 2,341 sheets of the Damini-i-Koh, 2,331 of Mr. McPherson's first and 4,620 of his second programme) were repoduced and 233,260 copies supplied. There now remain about 1,708 sheets of the first half and about 1,710 sheets of the second half of Mr. Craven's third programme; when these are reproduced the district will be finished. The 1,708 sheets referred to above will probably be reproduced for sale during the first half of the next financial year.

166. *Cuttack* (*Banki Government estate*).—The reproduction of the maps of this estate was completed during the year; 3,390 copies of the remaining 113 traces were supplied making a total of 6,330 copies of maps (211 traces) for the whole estate. Throughout the demand was 30 copies of each map.

167. *Hazaribagh*, (*Kodarma estate.*)—This estate falls on 138 sheets and these were traced on 134 paper traces; 20 copies of each were required and 2,680 copies were accordingly supplied during the year.

168. *Midnapore* (*parganas Kaliapur, Balarampur, Jamirapal and Dipakiarchand.*)—Of 464 sheets for which the Settlement Officer sent copy orders all have been reproduced and **23,187** copies supplied during the year.

169. *Midnapore* (*Nayabasan and Rohini estates.*)—These fall on 597 sheets and the reproduction work is still in hand. Two hundred and ninety-nine sheets have been reproduced, **9,425** copies printed and **7,195** copies supplied.

Both these maps and those referred to in the last paragraph have given a great deal of trouble to the reproduction staff.

170. *Murshidabad* (*Beldanga and Fatehsingh estates.*)—Of the former there were 26 traces and of the latter 213 traces for reproduction. All the traces of Beldanga have been dealt with and the 6,995 copies asked for supplied. Of Fatehsingh *130* traces have been reproduced and **16,842** copies supplied. Here again we have had much trouble over the reproduction of the traces; some traces had to be returned as they were too large to be capable of reproduction by our plant and others were very badly drawn. All have had to be touched up before they could be vandyked.

With reference to the criticism of maps made in the last three paragraphs, I must point out that the Director of Land Records is doing what he can to improve the drawing criticized; it cannot be expected that he should give as good results in odd settlements as in major ones; it is, however, gratifying to notice that every endeavour is being made to improve minor settlement drawing and we may, therefore, hope that in the future Mr. Berkeley and his staff in the Bengal Drawing Office will find less difficulty in dealing with the type of map here discussed. As will readily be imagined, it is very difficult to estimate for reproduction work of this nature.

171. *Patna* (*Mekra, Kanhaipur and Sarhan villages—season 1905-06*).—These villages fall on 12 sheets and 30 copies of each have been printed and supplied during the year.

172. *Cuttack (Dompara estate.)*—In all 108 sheets were to be reproduced, 30 copies of each being required, 95 sheets had to be traced on 95 traces, and the other 13 were for direct reproduction. This work has been carried out during the year and 3,240 copies have been supplied.

173. *Gaya (Makrudpur estate—season 1900-01.)*—Of the 275 sheets in which this estate falls, all have been traced on 275 paper traces and the traces have been examined; no reproduction has been made, but it will be completed before the end of this financial year. Twenty copies of each trace are required.

174. *Reproduction for attestation.*—The table below gives full details of this work :—

District.	Number of sheets.	Number of reproductions issued during the year.
Ranchi	1,496	25,093
Singhbhum (Dalbhum) ...	1,020	
Midnapore	665	
Santhal Parganas ..	1,703	
South Monghyr ...	1,479	
Patna	1,423	

The Settlement Officer of Midnapore will send 55 more sheets to be reproduced for attestation immediately after the Puja vacation.

175. *Thana maps.*—The table below gives the reproduction outturn of these maps during the year :—

District.	Number of sheets.	Number of copies struck off	Number of thanas.
Bhagalpur	14	2,800	7
Cuttack	1	200	1
Ranchi	13	2,600	9
Purnea	16	3,200	7
	Total ...	8,800 copies.	

176. *Tri-junction Mark Maps.*

District.	Copies.	Sheets.	Mark Maps.
Bhagalpur ...	397	34	7
Ranchi	1,200	40	9
Cuttack ...	400	4	1
Purnea	189	63	9
Total ...	2,186 copies.		

177. *Miscellaneous work.*—The following miscellaneous work has been dealt with during the year :—

(*a*) *District Cuttack.*—Sixty copies of correction slips for four thana maps for the Director of Land Records.

(*b*) *District Puri.*—Seven hundred and sixty-two copies of 254 cadastral sheets of Parikud for the Director of Land Records.

(*c*) *District Puri.*—One thousand copies of five cadastral sheets for the Collector of the district.

(*d*) One hundred and twenty-five copies of 125 cadastral maps for the Executive Engineer, Brahmini-Byturni Division.

(*e*) *District Cuttack.*—One thousand three hundred copies of 130 cadastral maps for the Collector of the district.

(*f*) *District Champaran.*—Seven copies of seven cadastral maps for the Collector of the district.

(*g*) *District Hosaribagh.*—(*Sarkari Hata Estate*).—Twelve copies of this map for the Deputy Commissioner of the district.

(*h*) *Calcutta.*—Three hundred and fifty copies of eight maps for the Deputy Chairman of the Corporation.

(*i*) *Calcutta.*—Five thousand and forty-six copies of 348 fair maps and 3 index maps for the officer in charge, Calcutta Surveys.

(*j*) *District Hooghly.*—Fifteen copies of correction slips for one Thana map for the Director of Land Records.

(*k*) *District Murshidabad.*—Twenty copies of correction slips for one Thana map for the Director of Land Records.

(*l*) Eight thousand two hundred and fifty copies of miscellaneous work for the Settlement Department.

178. The total issue of copies of maps during the year has been *689,613*. This excludes work done for Eastern Bengal. The gross supplies have been 8,61,401 copies. A small portion of this outturn was dealt with out of office hours.

It will be noticed that this outturn is better than that of last year, and when the very miscellaneous nature of the programme is taken into account it is clear that the outturn reflects the greatest credit on Mr. L. F. Berkeley and his staff. As soon as the Government of Eastern Bengal and Assam starts its own reproduction office on a scale large enough to meet the demand of its Province, the Bengal Drawing Office will obtain considerable relief; it is only because pressure has been maintained for some time past that serious hitches in reproduction programmes have not occurred. In addition matters have been complicated by the attempts which have been made to wipe off all arrears. The Director of Land Records and I have recently gone into this matter and programmes have now been so arranged that the near future will see the office working normally; the future normal outturn for Bengal is something between 750,000 and 1,000,000 copies of maps but there are indications that the office will, before long, increase considerably in other directions than its suggested normal programme. If this occurs considerable enlargement will be required and I would strongly advise the moving of the office from Calcutta to Ranchi or Hazaribagh as soon as a permanent increase of work is shown to be likely.

Badar Section.

179. During the year the *badars* given below have been received in office and 30 *badars* remained from last year. All the original maps have been corrected with the exception of 51 villages of district Midnapore:—

	Villages.
South Bhagalpur	95
Purnea	580
Ranchi	282
Midnapur	1,069
Patna	3

180. Headings and adjoining village names have been corrected according to the spelling and numbering given in Thana lists of:—

District	Sheets corrected.
Purnea	1,526
South Bhagalpur	2,464
North Monghyr	299
Ranchi	621
Midnapur	1,180
Patna	12
Total ...	6,102

Districts Purnea and Bhagalpur are now absolutely completed in this respect.

181. Village names have been corrected and Thana numbers entered in the traverse volumes of:—

District				Villages.
North Monghyr	...	...	...	1,285
North Bhagalpur	...	...	...	1,233
Darbhanga	...	...	...	678
Cuttack ...	...	...	...	1,463
		Total	...	4,659

The field books for 2,908 villages of Darbhanga and 1,995 of Cuttack have been similarly dealt with.

The two last-named districts have now been completely dealt with. Now that the work of touching up original maps for reproduction has been reduced greatly; this work will proceed much more rapidly than hitherto (*vide* next paragraph).

182. The section has touched up, for reproduction, 1,156 sheets of Ranchi and 1,054 of Midnapore and the scales on 1,351 sheets of Ranchi, Midnapore, Bhagalpur and Purnea.

On 3,278 sheets, the sentence "made and published by the authority of Government" has been typed during the year.

Map Record Section.

183. It is expected that Government orders for the better safeguarding of records against fire and the ravages of insects will shortly be issued; this case and has been pending for some time and has been delayed by the future of the office in its relations to Eastern Bengal work not having been settled. It is now understood that Shillong will have its own office by the end of this financial year, and so very little more delay in dealing with this important matter should take place. I have told the officer in charge of the Bengal Drawing Office to estimate at once for further rack accommodation for the Revenue Survey maps of the province which are shortly to be stored in the Bengal Drawing Office. The future of modern survey traverse volumes will also have to be considered; I think that they also should be transferred from the head-quarters of the Survey of India to the Local Drawing Office.

184. During the year 5,720 original sheets of Bengal were received in the section; the total number of sheets belonging to Bengal now in the office is **92,838**. In addition we have at present **14,835** sheets of Eastern Bengal. All the maps have been *racked* excepting those in use in the Standard Mapping, Reproduction and Badar Sections. Lists either *pargana-war* or *thanawar* have been made for **6,012** sheets during the year, making a total of **82,368** sheets similarly dealt with to date.

Lists of the balance are either in hand or are awaiting the receipt of Thana lists in the office.

185. Serial numbers have been posted on 15,131 sheets during the year; altogether 79,578 sheets have been treated in this way. Seven thousand and sixty-nine sheets with broken edges were repaired and 14,667 paper traces stored during the year.

CHAPTER III.

PART I.—TOURS OF THE SUPERINTENDENT OF PROVINCIAL SURVEYS.

186. I have been in the field and on tour for about seven and a half months of the year under report; I have inspected each section during the field-season on at least one occasion, and have visited each one in recess. Unfortunately, owing to stress of work caused by the pending reorganization of Bengal Surveys, I have not been able to pay proper attention to cadastral inspection; this has been inevitable under the circumstances but is none the less regrettable on that account.

PART II.—SERVICES OF OFFICERS.

187. The executive officers have been—Mr. R. B. Smart (Calcutta Surveys), (2) Mr. A. W. Smart (No. 6 Party), (3) Mr. L. F. Berkeley (Bengal Drawing Office), (4) Mr. C. S. Kraal (No. 5 Party) and (5) Mr. N. Bedford (No. 4 Party). All these officers have worked zealously; I specially commend to the notice of the Board, Messrs. R. B. and A. W. Smart and Mr. L. F. Berkeley; these officers held charges which were unusually intricate and they have discharged their duties with considerable ability and to my utmost satisfaction.

188. Amongst the junior officers Mr. Delaney, Sub-Assistant Superintendent, has again done unusually good work in the Sunderbans Survey. Mr. Hart, Offg. Extra Assistant Superintendent has also done exceedingly well. All the other officers, with one exception, have done well. I have reason to suppose that the exception will be shortly transferred from Bengal Surveys.

189. Before closing this report, I beg to be permitted to acknowledge the very great help that has been given me throughout the year by Mr. H. McPherson I. C. S., Director of Land Records; his sympathetic help, always so freely given, has simplified a host of difficulties.

I have the honour to be,

SIR,

Your most obedient servant,

F. C. HIRST, CAPTAIN, I. A.,

Offg. Superintendent of Provincial Surveys, Bengal.

APPENDIX I.

PART A.

Summary of the outturn of work of the survey parties in Bengal for 1907-08.

DISTRICT.	TRAVERSING.					CADASTRAL SURVEY.			RECORD WRITING.		TOPOGRAPHICAL SURVEY.
	Number of villages.	Linear miles of chaining.	Number of stations at which theodolite was set up.	Number of azimuths.	Number of subtraverses.	Block	Holdings and subholdings.	Sheets.	Blocks.	Holdings and subholdings.	Square miles.
1	2	3	4	5	6	7	8	9	10	11	12
Private Estates.											
Monghyr Hill block ...	...	...	...	...	...	...	...	...	...	...	185
Do. Ganges Diara (thana Surajgarha).	36	129·13	615	...	38	...	...	...	...	...	...
Patna current	2,367	49,76·77	32,239	107	1,385	...	...	...	...	...	...
Shahabad	762	1,372·99	9,285	31	360	...	...	...	...	...	...
Midnapore (Jhargram Estate).	595	911·69	5,392	27	148	...	...	...	...	...	...
Singhbum (tenure of Babu Abhiram Tung).	6	45·99	339	2	19	...	...	...	...	...	...
Singhbum (disputed boundary between Dalbham and Mourbhanj).	...	19·17	194	...	9	...	...	...	...	...	...
Ranchi	884	3,760·15	24,612	189	1,016	...	...	...	...	...	...
Manbhum (Pargana Barabhum).	597	2,212·96	13,998	105	633	...	...	...	...	...	...
Khulna Sundarbans ...	(c)75	1,752·00	7,915	220	249	...	...	...	...	...	1,311
Miscellaneous.											
Bhagalpur Purnea (Nepal boundary Hosi River. (Putting up refuse and pillars).	...	9·67	42	...	2	...	...	...	...	...	...
Monghyr—Demarcation of boundary between parganas Haveli Karagpur and Sakrabadi.	...	...	...	...	...	...	...	...	...	...	...
Darbhanga—Demarcation of boundary between Raspar-Patasia and Chaparson 1,350 and Mahamadpore.	2	32·15	162	...	(e)7	...	...	...	...	...	...
Hooghly—Chinsura Khas Mahal.	1	19·27	436	3	44	...	...	...	...	...	...
Shahabad—Taufir Bhedia	20	39·59	211	3	4	...	...	...	...	...	...
Ranchi Municipality ...	2	50·46	645	...	62	...	...	...	...	...	...
Sikkim (Mining claims)...	(b)7	49·99	333	3	28	...	...	...	...	...	...
Calcutta Suburbs Surveys*	...	...	...	...	...	...	...	...	...	...	...
Port Commissioners' Land Acquisition Survey Scale 80=1 mile.	(d)16	67·15	2,876	4	301	16	5,346	134	16	5,346†	...
Salt Lake area in Dhappa Scale 32=1 mile.	(d)2	38·62	300	1	23	2	...	12	2	...	2·68
Total ...	5,378	15481·54	100,594	695	4,328	18	5,346	146	18	5,346	1498·68

(a) Connecting lines.
(b) Claims.
(c) Polygons.
(d) Blocks.
* In Calcutta (Suburban area) the work done during the season consists of the compilation of maps both for Municipality and the Collector and also correction of records as removed from the attestation officer.
† Exclusive of the extraction of areas of 4,000 huts, wells and drains situated within the Suburban area of Calcutta.

F. C. HIRST, CAPTAIN, I.A.,
Offg. Superintendent of Provincial Surveys, Bengal.

APPENDIX I.

PART B.

Statement of outturn and cost rates.

District and Estate.	Discription of work.	Estimated area to be dealt with in square miles.	Year of inspection of operations.	Area surveyed in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.	Remarks. (Explanation of unusually high expenditure.)
				During the year under report.	Total, including previous years.	During the year under report.	From beginning to end of the year under report.				
1	2	3	4	5	6	7	8	9	10	11	12
Private Estates.											
Monghyr Hill Block ...	Traverse and Topographical.	458	1905	183	458	40·8	20·1	Nil	Nil	20·1	A good rate.
Ditto Ganges Diara (Surajgarha)	Traverse ...	42	1908	42	42	20·4	20·4	Nil	Nil	20·4	Ditto.
Patna	Do. ...	2,075	1906	1,142	1,904	41·0	38·1	81	3,321	38·2	These rates have all been raised because grain compensation allowances have been paid to the establishment; considering this the rates are not high.
Shahabab	Do. ...	4,373	1907	347	347	37·3	37·3	4,026	150,149	42·3	
Midnapore (Jhargram Estate).	Do. ...	211	1907	211	211	33·1	33·1	Nil	Nil	33·1	
Singhbhum (tenure of Babu Abhiram Tung).	Do. ...	14	1908	14	14	35·6	35·6	Nil	Nil	35·6	
Ranchi	Do. ...	7,081	1901	1,208	7,134	34·3	34·6	Nil	Nil	34·6	
Manbhum (pargana Barabhum).	Do. ...	638	1908	638	638	41·6	41·6	Nil	Nil	41·6	High rate due to small area detached from main programme.
Khulna-Sundarbans ...	Do. ...	2,003	1906	1,311	2,264	55·8	56·9	Nil	Nil	56·9	Good rates.
Ditto ...	2" Topographical	2,003	...	1,357	2,210	42·6	39·1	Nil	Nil	39·1	
Ditto ...	4" do. ...	...	...	54	54	50·00	50·00	Nil	Nil	50·00	
Miscellaneous.											
Bhagalpur—Nepal boundary (putting up reference pillars).	Traverse ...	...	1905	...	...	...	...	...	...	...	A linear survey.
Monghyr—Demarcation of boundary between pargana Haveli, Kharagpur and Shakrabadi.	Do. ...	...	1907	...	...	...	...	...	...	...	Ditto.
Darbhanga—Demarcation of boundary between Raspur Patasla and Chaparsan 1,250 and Mahamadpur.	Do. ...	2	1908	2	2	Nil	Nil	Nil	Nil	...	A demarcation survey and ordinary rate rules do not apply to it.
Hooghly-Chinsura Khas Mahal.	Do. ...	1·05	1908	1·05	10·5	453	453	Nil	Nil	453	Town surveys ordinary rates do not apply.
Shahabad—Taufir Bhedia.	Do. ...	2	1908	2	2	Nil	Nil	Nil	Nil	...	Demarcation work.
Ranchi Municipality ...	Do. ...	7	1908	7	...	182	182	...	...	182	Town survey.

District and Estate.	Description of work.	Estimated area to be dealt with in square miles.	Year of inspection of operations.	Area surveyed in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile	Remarks. (Explanation of unusually high expenditure).
				During the year under report.	Total including previous year.	During the year under report.	From beginning to end of the year under report.				
1	2	3	4	5	6	7	8	9	10	11	12
Sikkim (Mining claims)	Traverse ...	2	1908	2	2	(a) 420	420	...	...	420	(a). Difficult country, Small area and cost includes heavy travelling charges to Darjeeling and back.
Calcutta Suburbs Survey.	...	...	...	...	...	...	...	...	...	...	The chief work done during the year has been the compilation of fair maps of the added area and Panchannagram.
Port Commissioners Land Acquisition Survey.	Traverse ...	2	1907	1	2	...	...	Nil	Nil	...	Very close work; ordinary cost rate rules do not apply.
	Cadastral ...										
Salt Lake area in Dhapa.	Topographical.	2	1908	2	2	...	...	Nil	Nil	...	
Singhbhum (Dalbhum) Mourbhanj boundary.	Traverse ...	Linear	1908	...		...	...	...	...	...	A linear survey.
Total ...	Traverse ...	16,907·05	...	5,107·05	13,107·05	...	...	...	...	...	
	2" Topographical.	2,006	...	1,257	2,212	...	...	...	...	...	
	4" do. ...	...	...	54	54	...	...	...	...	...	

F. C. HIRST, Captain, I.A.,
Offg. Superintendent of Provincial Surveys, Bengal.

APPENDIX II.

Statement of sums expended for the year ending 30th September 1908.

District, &c.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.			
		Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instalments.	Total.	Actual direct cost.	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instalments.	Total.
1	2	3	4	5	6	7	8	9	10
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Patna	Traverse ...	41,444	2,643	1,803	46,890	68,014	5,078	2,923	76,015
Shahabad	Do. ...	11,459	1,007	499	12,965	11,459	1,007	499	12,965
Ranchi	Do. ...	36,927	2,970	1,591	41,493	2,26,405	13,273	8,389	2,47,067
Singhbum—Tenure of Babu Abhi Ram Toong.	Do. ...	441	39	19	499	441	39	19	499
Manbhum-Barabhum ...	Do. ...	23,443	2,136	1,020	26,599	23,443	2,136	1,020	26,599
Khulna-Sundarbans	Do. ...	64,770	5,693	2,818	73,281	1,15,388	8,435	4,951	1,28,744
Ditto	Topo 2" ...	47,316	4,159	2,059	53,533	77,457	5,807	3,331	86,595
Ditto	Topo 4" ...	2,387	210	104	2,701	2,387	210	104	2,701
Miscellaneous.									
24-Parganas Sundarbans (areas) ...	Topo 4" ...	17	2	...	19	17	2	...	19
Calcutta Suburbs Survey including Revenue work and Panchannogram.	Traverse ...	191	17	...	208	64,713	3,396	...	68,109
	Cadastral ...	20,916	1,922	...	22,848	1,54,869	9,233	...	1,64,102
	Records ...	3,238	285	...	3,523	38,028	2,046	...	40,074
Land Acquisition Survey for Port Commissioners.	Traverse ...	*4,188	368	...	4,556	4,188	368	...	4,556
	Cadastral ...	*23,182	2,038	...	25,220	23,182	2,038	...	25,220
	Records ...	*1,762	155	...	1,917	1,762	155	...	1,917
Dhappa-Salt lake area ...	Traverse ...	412	36	18	466	412	36	18	466
	Cadastral ...	1,497	132	65	1,694	1,497	132	65	1,694
Fair maps for Port Commissioners	Ditto ...	771	68	...	839	771	68	...	839
Calcutta Block plans for Collector	Cadastral ...	* 1,072	...	...	1,072	1,072	...	...	1,072
Monghyr—Areas	Records ...	2,405	210	105	2,720	2,405	210	105	2,720
Do. Hill blocks ...	Topo 2" ...	6,607	580	287	7,474	12,386	893	531	13,810
Do. Ganga Diara (thana Sarajgarha).	Traverse ...	761	66	33	860	761	66	33	860
Bhagalpur and Purnea—Nepal boundary, Kosi River (putting up reference pillars).	Do. ...	576	50	25	651	576	50	25	651
Monghyr—Demarcation of boundary, pargana Haveli, Kharagpur and Sakrabadi.	Do. ...	927	81	40	1,048	927	81	40	1,048
Darbhanga—Demarcation of boundary Raspur Patasia and Chaparson	Do. ...	609	54	26	689	609	54	26	689
Hooghly-Chinsura Khas Mahal ...	Do. ...	401	35	17	453	401	35	17	453

APPENDIX II—*concluded.*

District, &c.	Description of work.	Expenditure incurred during the year under report.				Total expenditure from inception to end of the year under report.			
		Actual (direct charge).	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instal. ments.	Total.	Actual direct cost.	Share of Superintendent of Provincial Survey's pay and his office.	4 per cent. charge for instal ments.	Total.
1	2	3	4	5	6	7	8	9	10
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Shahabad—Taufir Bhedia ...	Traverse ...	453	40	20	513	453	40	20	531
Ranchi—Arrears	Cadastral ...	9	1	...	10	2,742	144	115	3,001
Do. Municipality ...	Traverse ...	1,126	99	49	1,274	1,126	99	49	1,274
Singhbhum-Dalbhum, Mourbhanj boundary.	Do.	260	23	11	294	870	54	37	961
Midnapore-Jhargram Estate ...	Do. ...	6,279	552	273	7,104	6,279	552	273	7,104
Do. Jalamutha and Majnamutha Government Estate (arrears).	Cadastral ...	61	5	3	69	577	31	25	633
Sikkim—Mining claims ...	Traverse ...	840	...	...	840	840	...	...	840
Total ...	Traverse ...	1,95,507	16,909	8,267	2,20,683	5,36,275	34,799	18,339	5,79,413
	Cadastral ...	47,508	4,176	68	51,752	1,84,710	11,546	205	1,96,461
	Records ...	7,405	650	105	8,160	42,195	2,411	105	44,711
	Topo ...	56,326	4,951	2,450	63,727	92,347	6,913	2,966	1,03,125
Bengal Drawing Office ...	Standard maps ...	13,668	1,201	...	14,869	98,703	6,121	...	1,04,824
	Traverse charts ...	7,104	624	...	7,728	7,972	669	...	8,641
	Badars ...	7,266	639	(c)316	8,221	25,904	1,689	542	28,135
	Map Records ...	2,922	257	...	3,179	19,896	1,120	...	21,016
	Thana Maps ...	3,738	328	...	4,066	15,118	999	...	16,117
	Trijunction mark maps.	2,285	201	...	2,486	7,807	477	...	8,284
	Correction and touching up of Midnapore maps.	549	48	...	597	881	64	...	945
	Preparation and Reproduction of boundary mark maps of Purnea and Darbhanga.	492	43	...	535	492	43	...	535
	Reproduction for attestation.	5,308	467	...	5,775	17,935	1,129	...	19,064
	Reproduction for sale and distribution.	(a)58,599	5,150	...	63,749	58,599	5,150	...	63,749
	Extra Departmental work.	(b)1,651	145	...	1,796	5,263	333	...	5,596
Grand Total ...	...	4,10,318	35,789	11,296	4,57,313	11,03,997	73,563	23,157	12,00,716

(a) Of Purnea, Ranchi, Bhagalpur, Monghyr, Hazki district, Cuttack, Santhal Parganas, Midnapore, Kodarma district, Hazaribagh, Beldanga and Patchpur districts Murshidabad, Patna, Dumjana district, Cuttack and Mahendpur district Gaya.
(b) Copies of maps supplied to applicants on payments.
(c) Four per cent. instalments applied under the orders of Government of India contained in their No. 213-69-2, dated 17th February 1908.
* Work done Extra Departmentally.
† Includes Rs. 2,043 on account of cost of instruments, forms, etc., paid by the Port Commissioners direct.

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REVENUE DEPARTMENT.

LAND REVENUE.

CALCUTTA, THE 2ND APRIL 1909.

RESOLUTION—No. 1874L.R.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1908, with the remarks of the Board of Revenue thereon.

The Survey and Settlement Reports for the year ending the 30th September 1908 have been prepared generally in accordance with the orders of Government, and are within the prescribed limit of pages. They have, however, been submitted to Government nearly two months late. This is due to delay in the submission of the Report of the Superintendent of Provincial Surveys, who has had to devote much time to the framing of a scheme for the organization of a separate Survey Department for Bengal, and to arrangements for the division of the Survey Office between this Province and that of Eastern Bengal and Assam. This scheme has recently received the sanction of the Secretary of State, and each Province will henceforth have a Survey Department of its own. Major R. T. Crichton, C.I.E., is now in charge of the Survey Department in this Province under the designation of Director of Surveys, Bengal, and Captain Hirst has been deputed to the Province of Eastern Bengal and Assam.

2. The main work of the Survey and Settlement Departments during the year was carried on by the Bihar and Chota Nagpur parties in the districts of Patna, Shahabad, Monghyr, Bhagalpur, Purnea, Ranchi, Manbhum and Singhbhum. In addition, the settlement of certain zamindari estates in the Sonthal Parganas, that of the Majnamutha and other estates in Midnapore, the resettlement of Angul, the revision settlement in Cuttack and Balasore, and the topographical survey of the Khulna Sundarbans were operations of considerable importance. For the most part, the year's programme was fully carried out by both Departments. The following comparative statement shows the amount of work done in the year under review and in the preceding year :—

	1906-07. Square miles.	1907-08. Square miles.
(1) Survey Department—		
Traverse survey	6,309	5,107
Topographical survey	1,591	1,313
(2) Settlement Department—		
Cadastral survey	4,176	4,477
Record-writing	5,249	5,491
Attestation	4,497	5,194
Final publication	5,145	4,931

In addition, 1,003 square miles of revisional cadastral survey were completed in Orissa. The decrease in traverse survey was due to the completion of the Sundarbans work. With 4,158 square miles completed during the year under report, the total area in respect of which a record-of-rights has now been prepared in Bengal, under the control of the Director of Land Records, amounts to over 44,000 square miles.

3. The cost-rates during the year for traverse survey in different major areas, as reported by the Superintendent of Provincial Surveys, are compared below :—

	1906-07. Rs.	1907-08. Rs.
Monghyr	35·9	40·8
Patna	34·2	41·0
Shahabad	...	37·3
Ranchi	37·3	34·3

The cost-rate in Manbhum was Rs. 41·6 per square mile.

The rates for 1907-08, so far as they relate to the Bihar districts, include the payment of grain compensation allowances on account of the high price of food-grains in those districts. The high rate of Manbhum is ascribed to the smallness of the area (638 square miles in pargana Barabhum) and its remoteness from the main work. The cost of cadastral survey and record-writing in Patna amounted to Rs. 204 per square mile, as against Rs. 165 in South Monghyr. The high rate in Patna was due to the smallness of the average field. Khewat writing was also found difficult owing to the minute and complex division of proprietary interests and to defects in the Collectorate Land Registration registers. The work of recording particulars about irrigation was also a heavy task. The Director of Land Records has observed that, as the cost-rate varies constantly according to the size of plots, the number of disputes and other contingencies, " it would be highly unsafe to adopt less than Rs. 180 as a normal basis for the cost of cadastral survey and khanapuri in Bihar settlement operations." In Ranchi, there was a large increase to Rs. 105·61 per square mile, from Rs. 86·24 and Rs. 89·52 in the two previous years. This has been ascribed to the increase in the percentage of the cultivated area and to the comparative smallness of the average field. The employment of Kanungos to help the Assistant Settlement Officers in inspecting cadastral survey and khanapuri was also responsible, to a certain extent, for the increase. The cost-rate in Dhalbhum fell to Rs. 105·53; and, but for the unhealthiness of the tract, a still lower figure might have been attained.

4. The important administrative change, inaugurated by the transfer of the cadastral survey and initial record-writing in Chota Nagpur from the Survey to the Settlement Department in October 1905, was completed by a similar transfer in Bihar at the beginning of the year under report. All cadastral work in the Province is now conducted by the settlement staff, the Bihar and Chota Nagpur parties having each an officer of the Survey Department as a professional adviser. It is a matter for considerable satisfaction that the results obtained under the new system have received the cordial praise of the Superintendent of Provincial Surveys. Mr. Reid and his assistants in Chota Nagpur set an excellent example in the production of maps of great accuracy, admirably suited for the purpose of reproduction; and the Bihar officers have done very well indeed in their first season.

5. Of the larger operations in progress, the traverse and topographical survey of the Government reserved forests in the Khulna Sundarbans, which was commenced in February 1907, was completed during the year. The total area dealt with is 2,264 square miles, and the total expenditure incurred Rs. 2,18,040. The survey of the Sundarbans of the 24-Parganas and Khulna has now been completed. It was a very difficult operation, presenting many features of a novel kind, both technical and administrative, and for the success obtained in this work, Major Crichton is entitled to great praise. The survey and the preparation of a record-of-rights of the district of Purnea was brought to a close. The resettlement of the Angul Government Estate, comprising an area of 669 square miles, was completed. The increase of revenue derived from the resettlement amounts to Rs. 21,000, while the operations have cost Rs 1,42,277, or As. 5-4 pies an acre. In fixing the new rates, special consideration has been shown in the case of new cultivation. The survey of the suburbs of Calcutta, including the Panchannogram Government Estate, was begun in February 1903, and has proved a complicated and difficult task. It is now all but completed. In paragraph 100 of his Report, the Superintendent of Provincial Surveys has made various suggestions in regard to the publication and maintenance of the maps prepared, and to the maintenance of the records, which will be communicated to the Corporation of Calcutta for consideration.

6. In the attestation proceedings of the year, in the district of Ranchi, 30 per cent. of the raiyats dealt with had to be recorded as non-occupancy raiyats, in accordance with the provisions of Act I (B.C.) of 1879. The great majority of these will now become occupancy raiyats under the new Chota Nagpur Tenancy Act (Bengal Act VI of 1908), which has been passed in order to remove the many serious defects of the old law, which, already notorious, had been much emphasised by the exact information obtained in the course of the settlement operations. In South Bhagalpur and South Monghyr, a prominent feature of the work was the extent and serious character of the disputes about

rent. Illegal enhancements had been made on an extensive scale, but in most cases the disputes were amicably settled under the provisions of the new section 109C of the Bengal Tenancy Act, introduced by the amending Act I of 1907. The work done by the officers, who were employed in this matter, was far from easy, but has resulted in such improved relations between landlords and tenants as promise to give peace and contentment over a large area. That this new provision has so soon been generally and successfully employed is a subject of congratulation to its authors. The settlement of fair rents, under section 105 of the Bengal Tenancy Act, on application from the landlord or tenant, was made on an extensive scale in South Bhagalpur. Rents were settled for 15,684 tenants, the average enhancement decreed amounting to 9½ per cent., due partly to excess area and partly to the rise in prices.

7. On this latter ground, an enhancement of three annas in the rupee was sanctioned by Government for the Majnamutha, Jalamutha and other temporarily-settled and Government estates in the district of Midnapore, although the actual rise in prices since the former settlement would have justified an enhancement of eight annas or more. The rents settled have actually resulted in an enhancement of 17·91 per cent. only; and a large portion of the additional revenue has been ear-marked for the improvement of the drainage channels and embankments of the estates. The operations in this district are carried on under conditions particularly trying to the officers engaged, and Mr. Hodson and his assistants have done well.

8. So far as district operations are concerned, recoveries on account of the cost thereof were postponed in Ranchi in consequence of the recent scarcity, and were carried on only in South Bhagalpur. The total amount recoverable there was Rs. 9,00,658, of which 98·8 per cent. was collected, coercive measures being found necessary only for 2·1 per cent. of the demand. As usual, the tenants throughout the area showed the greatest eagerness to obtain their maps and extracts from the record-of-rights, and almost the whole amount due from them was collected at the time of distribution of these papers.

9. The revision settlement of Orissa, as a preliminary to the continuous maintenance of the records, made good progress, notwithstanding the dislocation of work caused by heavy floods. It is satisfactory that the changes in procedure, organisation and staff, made in accordance with the experience of the previous year, have been successful. The statistics furnished by the attestation proceedings have clearly illustrated the necessity of keeping the settlement records up to date. The number of holdings dealt with was 352,872, and it was found that, during the ten years which had elapsed since the last settlement, ownership had undergone alteration in as many as 73 per cent. of the holdings, while the number of boundary changes was 33 per cent. of the number of plots. The Director of Land Records has reported that the revision is very popular with the raiyats, and he has forwarded with his report the following interesting extract from the report of the Settlement Officer (Mr. Taylor):—

"A large number of zamindars still regard the operations with some disfavour. The revision is, on the other hand, evidently welcomed by the tenants for the reasons given in the Director's Annual Report last year. This was strikingly shown during the past season's khanapuri operations in Cuttack. I have previously described how we were forced to select special areas in Cuttack in order that unnecessary harassment should not be caused to tenants holding lands in the flooded tracts. Thus, in thana Tirtol, certain areas in which considerable losses had occurred were excluded. When Mr. James, the Assistant Settlement Officer in charge, was inspecting the work in the adjoining protected area, a large number of tenants from the flooded portion came to him and begged that operations should start at once in their tract. They went so far as to deny loss of crops, and thereby ran the risk of losing the *takavi* advances sanctioned by the Collector. The Chakla Kanungo happened to be with Mr. James at the time, and assured him that there had been serious loss of crops, and the latter did not, therefore, accede to the tenants' request.

10. The maintenance of land records in the district of Sambalpur went on satisfactorily. It has a special interest from the light it throws on similar problems awaiting solution in the districts of Cuttack, Balasore and Puri. The year's work of the mutation offices established at Bettiah, Hajipur and Mabnar, under the Land Records Maintenance Act of 1895, gave further proof of the failure of the system introduced by that Act. The maintenance of records and the inspection of rent-rolls in Government and wards' estates show

a slight improvement. It is hoped that the general rules, which have recently been issued by the Board of Revenue, will lead to better results.

11. For some years Government has carefully watched the progress of the utilisation of the settlement records in the different branches of the administration, and in paragraph 9 of last year's Resolution (No. 2136L.R., dated the 9th April 1908), some improvement was noticed. The present Report of the Director of Land Records furnishes evidence of a more extended appreciation of the usefulness of records-of-rights, village cadastral maps and thana index maps. This appreciation is naturally far more marked in districts fully surveyed and settled than in those of which only small and isolated areas have been dealt with; but it is evident that District Officers do not even yet make the fullest use of the records and of the maps prepared in the survey. The experiment of employing Munsifs on settlement work, which is being made with the approval of the High Court, continues to be successful, and the Settlement Officers have reported very favourably on the quality of their work.

12. The Lieutenant-Governor observes that District Officers paid greater attention than before to the important subject of the inspection and maintenance of boundary marks. In Government and private estates taken together, about 95 per cent. of the total number of marks were inspected, but of the damaged or missing marks, only 37 per cent. were restored. The deficiency was greatest in wards' estates, the Bettiah Estate in Champaran being conspicuous in its failure to restore lost or damaged marks. It is desired that District Officers should not relax their activity in this branch of their work.

13. The Director of Land Records has brought to the notice of Government the services of those of his subordinates who have done conspicuously good work, and his remarks will be noted in the Appointment Department. The Lieutenant-Governor's acknowledgments are due more especially to Messrs. Murphy, Reid and Taylor, who have held charge of the most important of the settlements. The Report of Mr. T. S. Macpherson on the Porabat settlement is a work of permanent value. The Director of Land Records, Mr. H. Mcl'herson, has managed his Department with great thoroughness, and he has so controlled the various settlements as to secure the efficient performance of their work.

The thanks of the Lieutenant-Governor are also due to Captain Hirst for his efficient supervision of the Survey Department, and he notes with satisfaction the praise given to Messrs. R. B. and A. W. Smart and Mr. Berkeley. Captain Hirst's duties during the year were rendered specially arduous by the impending partition, which, by his care and attention, has been carried out without disturbance to the progress of field work.

14. Extracts from the two Reports are published for general information.

ORDER.—Ordered that this Resolution be published in the *Calcutta Gazette*, and that a copy of it, with copies of the two Reports and the Board's note, be submitted to the Government of India.

By order of the Lieutenant-Governor of Bengal,

F. W. DUKE,

Offg. Chief Secy. to the Govt. of Bengal.

No. 1875L.R.

COPY, with copies of the two reports, forwarded to the Surveyor-General of India for information.

No. 1876L.R.

COPY, with a copy of the Survey Report, forwarded to the Municipal Department of this Government for information and for necessary action, with reference to the last sentence of paragraph 5 of the Resolution.

No. 1877L.R.

Copy, with a copy of the Settlement Report, forwarded to the Political Department of this Government for information.

No. 1878L.R.

Copy, with a copy of the Settlement Report, forwarded to the Appointment Department of this Government for information, with special reference to paragraph 13 of the Resolution.

By order of the Lieutenant-Governor of Bengal,

A. H. LEY,

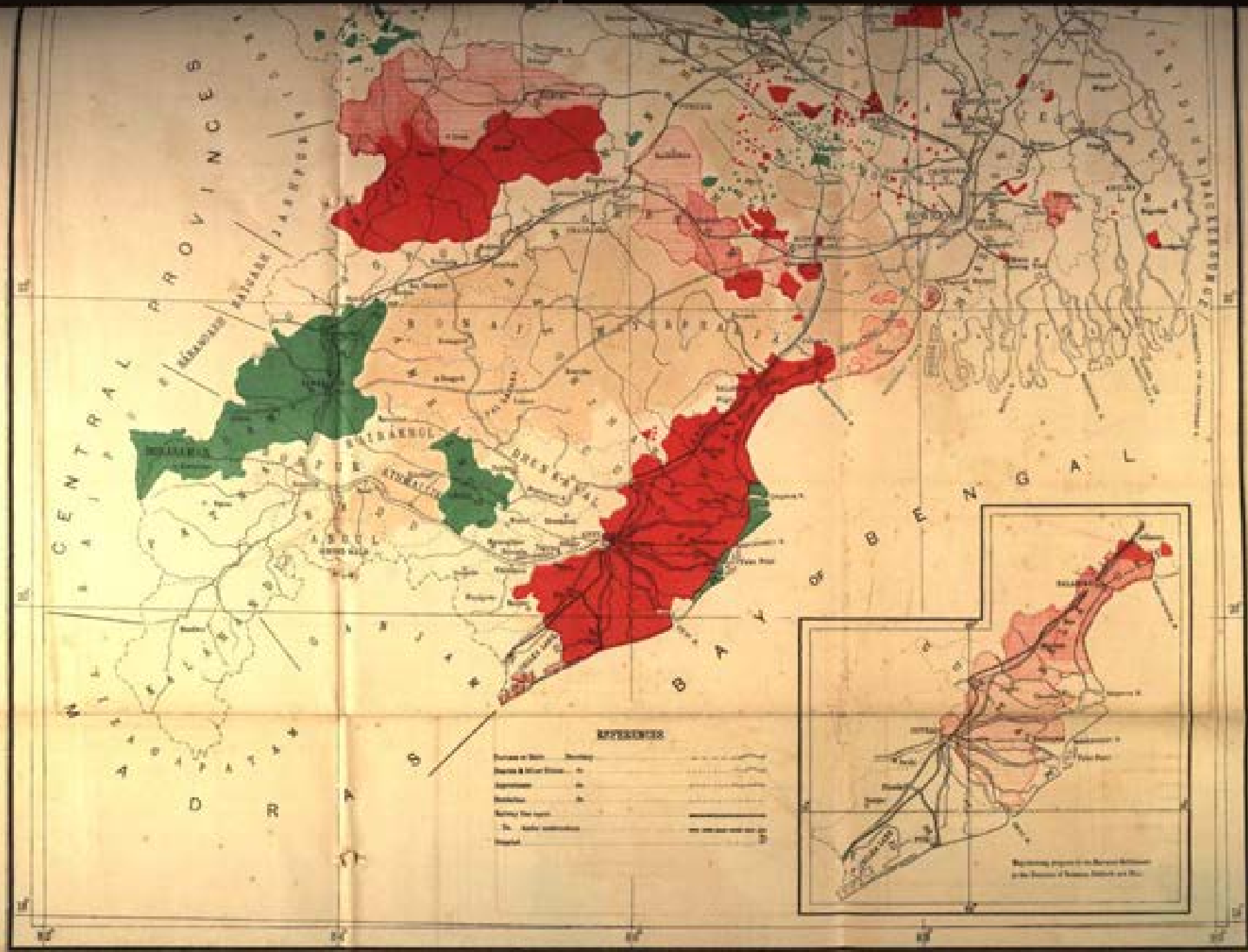
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Calcutta,
The 2nd April 1909.

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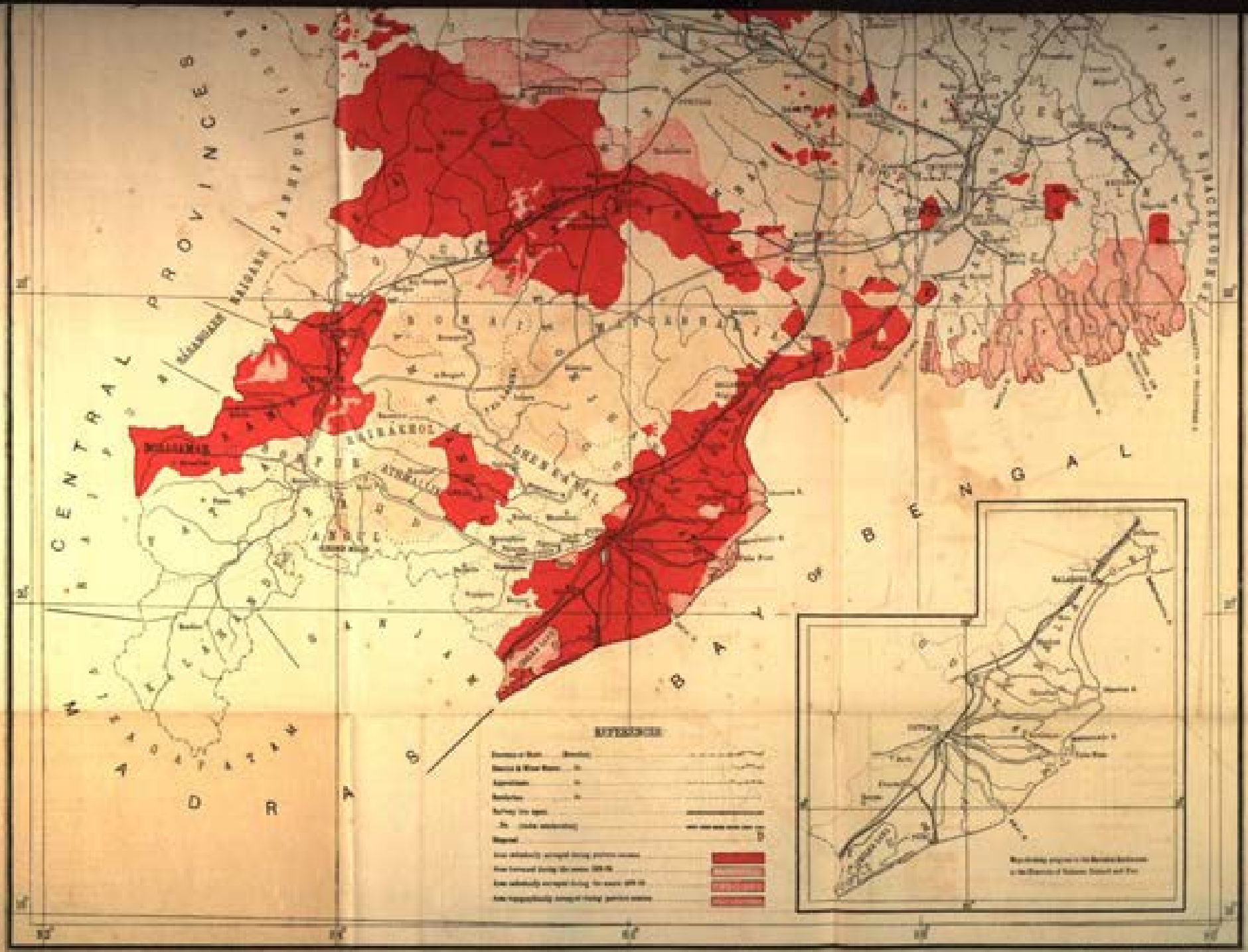
SETTLEMENT MAP




CENTRAL PROVINCES
BAY OF BENGAL
ARABIAN SEA
DRAS
MADRAS
MYSORE
HYDERABAD
BOMBAY
BERAR
BARODA
KHANDESH
NAGPUR
BALAGHAT
CHANDA
WARDHA
BHANDARA
RAIPUR
SAMBALPUR
BILASPUR
SURGUJA
JASHPUR
GANGPUR
BONAI
KEONJHAR
MAYURBHANJ
BALASORE
CUTTACK
PURI
GANJAM
VIZAGAPATAM
GODAVARI
KISTNA
NELLORE
CUDDAPAH
BELLARY
KURNOOL
ANANTAPUR
KOLAR
SALEM
COIMBATORE
TRICHINOPOLY
MADURA
TINNEVELLY
TRAVANCORE
COCHIN
MALABAR
NILGIRIS
PALK STRAIT
PALK BAY
Pamban
Rameswaram
Adam's Bridge
Manaar I.
Jaffna
Point Pedro
Trincomalee
Batticaloa
Kalmunai
Hambantota
Galle
Colombo
Negombo
Puttalam
Mannar
Talaimannar
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SURVEY MAP




CENTRAL PROVINCES
BENGAL
BAY OF BENGAL
REFERENCE

ANNUAL REPORTS

LIEUTENANT GOVERNOR
31 MAY.

ON

SURVEY AND SETTLEMENT OPERATIONS

BY THE

DIRECTOR OF LAND RECORDS, BENGAL,

AND THE

DIRECTOR OF SURVEYS, BENGAL,

FOR THE

Year ending 30th September, 1909.

CALCUTTA:
THE BENGAL SECRETARIAT BOOK DEPÔT.
1910.

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[Maximum limit, 35 pages.]

REPORT

OF THE

DIRECTOR OF LAND RECORDS, BENGAL.

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DEPARTMENT OF LAND RECORDS, BENGAL.

No. 4594.

FROM H. McPHERSON, Esq, I.C.S.,
Director of the Department of Land Records, Bengal,

TO THE SECRETARY TO THE BOARD OF REVENUE, L. P.,
LAND REVENUE DEPARTMENT.

Dated Calcutta, the 6th December 1909.

SIR,

I HAVE the honour to submit the Annual Report on the Survey and Settlement operations conducted under my supervision during the year ending the 30th September 1909. Up to this year it has been customary to print separately the Annual Reports of the Director of Land Records and of the Superintendent of Provincial Surveys (now Director of Surveys), although both reports are reviewed together in a single Government Resolution. This year, at the suggestion of the Director of Surveys, the reports of both departments are published in one volume and are accompanied by the two maps showing annual progress in surveys and settlements, which have hitherto appeared in the Annual Land Revenue Administration Report of the Board of Revenue. The change will make for convenience of reference.

CHAPTER I.

GENERAL SUMMARY AND GENERAL REMARKS.

Extent of the year's operations

2. Survey and Settlement operations were in progress during the year in 16 districts of the Province. The area cadastrally surveyed during the year, including 1,629 square miles of revision survey in Orissa, was 5,007 square miles. Preliminary records were written for the same area. Records were prepared for attestation in 6,003 square miles, attested in 5,620 square miles and finally published in 4,234 square miles. The rents of 2,01,459 tenants were settled. The expenditure of the year amounted to Rs. 10,57,812.

Total area settled in the Province up to 30th September 1909.

3. The total area for which a record-of-rights has now been completed under the control of the Department is 47,674 square miles. Of this, 3,667 square miles (excluding Orissa revision work) were completed during the year under report. Progress during the last twenty-three years has averaged 2,073 square miles a year.

Future programme.

4. Important proposals have been submitted to the Board during the year, (1) to provide for the revision settlement of the North Bihar districts, (2) to reduce the programme of the Bihar party by one-half, (3) to start a third party in the Midnapore district, and (4) to increase the number of gazetted officers allotted for settlement work. The proposals have received the approval of the Board and are now being considered by Government.

Settlement staff.

5. The largest number of Settlement and Assistant Settlement Officers employed during the field season was 8 and 135 against 9 and 125 of the preceding season. On account of the inadequate allotment of Deputy and Sub-Deputy Collectors to settlement, the employment of competent outsiders had to be continued. It is hoped that before next field season opens, orders will have been received increasing the number of officers to be deputed to this important branch of the administration from the cadres of the Covenanted, Deputy and Sub-Deputy services. Work is at present crippled by the dearth of gazetted officers and in order to overtake the sanctioned programme resort has to be had in undue measure to an expedient that was condemned by Government in 1904.

Settlement completion reports.

6. Considerable progress has been made with final report-writing. Mr. Byrne's report on Purnea was reviewed by me and submitted to the Board during the year. The reports on the Angul settlement written by Rai Narayan Chandra Naik Bahadur, Settlement Officer, and Mr. McLeod Smith, Deputy Commissioner, have been reviewed, and submitted to the Commissioner. The Sonthal Parganas report, to which I devoted much time last year, was completed and submitted to the Commissioner of the Bhagalpur Division in August last. It has been forwarded by him to Government since the close of the year. The Seraikella and Kharsawan report which had been kept pending from the previous year was disposed of during the year. The objections raised by the Deputy Commissioner were considered at a conference held in Chaibasa in December, 1908, and the suggestions of the conference were accepted by Government in its Resolution on the report, dated the 10th March, 1909. The report on the Dompara settlement of Cuttack was reviewed and submitted to the Board in August last. Mr. Murphy of the Bihar settlement was placed on special duty for 4½ months during the last recess to compile the final reports of Bhagalpur and South Monghyr. He has not yet submitted them, but I understand that he has completed Bhagalpur and has made progress with South Monghyr and that the draft reports may be expected shortly. Maulvi Muhammad Chainuddin's report on the Fatehsingh, Beldanga and Mahisar settlements of Murshidabad are now passing through the press and will be submitted shortly. The Parikud report has just been received from the Settlement Officer. The following minor reports were also submitted in the course of the year : (1) Mahal Bharatpur and Kismat Noapara in Murshidabad ; (2) Alluvial accretions of the Damodar river.

Maintenance of Jurisdiction lists and maps.

7. During the year 22 proposals for changes in thana jurisdictions and 8 proposals affecting the jurisdiction of police outposts were received for examination. In the majority of the proposals defects were noticed which might have been avoided if the Jurisdiction maps and lists had been fully consulted before the proposals were made. Fourteen notifications sanctioning changes of jurisdiction were communicated and correction slips in respect of them have been printed and circulated. The preparation and distribution of indices to the district volumes of the Jurisdiction lists which were commenced during the previous year under instructions contained in Government Memorandum No. 1313Jur., dated the 2nd March 1908, were completed during the year. The insertion of roads, rest-houses and thana head-quarters on copies of Jurisdiction maps directed to be made in the same Government order has made good progress. Up to the end of the year maps with the requisite details marked on them have been received from 18 Collectors and are now due from 3 officers only. The details are being inserted in the maps of this office, and the Inspector-General of Police is being furnished with a complete set of the maps thus completed.

Training of junior civilians.

8. Messrs. Geary, Hallet and Luby were trained under the Settlement Officer of Bihar and Messrs. Bridge, Beal and Manooch under the Settlement Officer of Chota Nagpur for a period of two months during the last field season. The course of training covered the whole of the stages of survey and settlement work. At its close the officers were put through an examination and from the results I am satisfied that they paid attention to their training and acquired a practical knowledge of survey and settlement which will be useful to them in their

every-day work. It has recently been decided by Government that the training shall, in future, be confined to young civilians who have completed not more than two years of their service. It is for consideration whether the training should not, as in Eastern Bengal and Assam, be extended to the junior members of the Deputy and Sub-Deputy services. The demands that are constantly made now-a-days from all branches of the administration for officers with survey and settlement experience, are difficult to comply with. The difficulty would be lessened if all officers received an initial three months' training in the early years of their service.

Training of Munsifs.

9. Twelve Munsifs as usual were under deputation to survey and settlement work, but as two broke down and reverted within three months of joining, ten Munsifs were actually employed during the year. Of these, seven were trained in the Bihar settlement and three in the Chota Nagpur settlement. After completion of their training, three from Bihar and one from Chota Nagpur reverted to general duty at the end of the field season, leaving me the services of six officers during the recess. All the officers who completed their training did justice to their deputation and gave satisfaction to the Settlement Officers under whom they were placed. Six additional recruits have joined us since the close of the year and of the twelve officers available for the field season, eight will be employed in Bihar and four in Chota Nagpur.

Training of district kanungos.

10. No district kanungos were trained in survey and settlement work during the year as their services could not be spared. Arrangements have been made to train a number of officers this year.

Survey and settlement rules.

11. During the past recess all the working rules of the Chota Nagpur settlement have been revised by the Settlement Officer and brought into line with the provisions of the new Tenancy Act. The Government rules under the Act have also received much attention. Provisional rules under sub-section (2) of section 266 were issued in the beginning of the year. They were drafted by Messrs. Vincent and Lister in consultation with the local officers and myself. Revised rules have since been draft-published under the provisions of sub-section (1).

The account rules and khewat writing rules of the Bihar settlement have also been revised during the recess.

Status of attestation officers.

12. An interesting case affecting the status of attestation officers has recently been disposed of by the High Court. They have ruled in a criminal appeal from Patna that a Revenue Officer engaged in attestation proceedings is a court and is competent to take cognizance of the offences mentioned in section 476 of the Criminal Procedure Code. The decision is important as it settles a point which has occasionally been disputed and has been viewed differently in the past by at least one District Judge.

Agrarian legislation.

13. The new Chota Nagpur Tenancy Act, VI of 1908, received the assent of the Governor-General in Council at the beginning of the year and the settlement work of the Ranchi and Singhbhum districts has since been governed by its provisions. Some of its more important provisions were also extended at the beginning of the field season to the two parganas of the Manbhum district, Barabhbhum and Patkum, that are now under settlement, and the question of its entire extension to these parganas and to the whole district is now under the consideration of Government.

The question of fresh agrarian legislation for Orissa has also been under consideration throughout the year. Mr. S. L. Maddox, I.C.S., was on special duty during the past cold weather to study the agrarian law of Orissa and has drafted an Orissa Tenancy Bill which includes provisions for the maintenance of Land Records.

A third subject which has received attention during the year is the working of the Bengal Survey Act, V of 1875. District Officers and Settlement Officers have been consulted by me and I have submitted with their opinions proposals for the amendment of the Act to bring it more closely into line with the requirements of settlement-surveys under the Bengal and Chota Nagpur Tenancy Acts. The proposals are still under the consideration of the Board.

CHAPTER II.

[*See* Appendices I to III]

SETTLEMENTS OF LAND REVENUE.

MIDNAPORE DISTRICT.

	Area in square miles.	No. of villages.
Government and temporarily-settled estates ...	509·96	1,485
*Zamindari estates	468·21	1,460
Total ...	978·17	2,945

14. *Programme and staff.*—Mr. Hodson, Deputy Collector, was Settlement Officer throughout the year, working under the supervision of the Collector. He had under his control from the beginning of the year 12 Assistant Settlement Officers and from the close of the field season, 5 additional officers deputed from other settlements. Mr. Hodson joined his new appointment in the Police Department after the close of the year and his place has been taken by Babu Rampada Chatterji, Deputy Collector, who has for the last 3 years been an Assistant Settlement Officer in the Midnapore settlement. The chief item in the programme for the year was the completion of the land revenue settlement of the temporarily-settled estates of Majnamutha and Jalamutha. In addition there were attestation and draft and final publication to complete in the Jhargram Ward's Estate and some case work to finish in the Nayabasan and Rohini private estates.

15. *Jalamutha and Majnamutha.*—Rate reports following the lines of that submitted by Mr. Taylor for Doro Dubnan Pargana were submitted during the course of the year by Mr. Hodson for all the remaining parganas of the two major estates and the numerous Jalpai areas. They were duly forwarded to the Board with my recommendations. Rents were settled for over 80,000 tenants during the year and over 50,000 objection cases under section 104E were disposed of. When the year began it was hoped that the whole work would be completed before its close, but our expectations were defeated by the extraordinary number of section 104E objections which poured in as soon as the settlement rent-rolls were draft-published. At the close of the field season I recommended the deputation to Contai of some additional officers from the Bihar and Chota Nagpur settlements. The recommendation was accepted but in spite of this deputation there still remains at the close of the year about 6,000 objection cases and there is a large amount of fair-copying and final publication to be done. Rent-rolls have also to be confirmed by the Collector for more than half of the villages of the area.

16. *Jhargram.*—The attestation, section 103A work and draft publication of the Jhargram Estate were completed by Babu Akhoy Kumar Mukherji within the year. Final publication was begun but could not be completed and case work still remains to be taken up.

17. *Nayabasan and Rohini.*—Case work under section 106 in Nayabasan and Rohini was completed during the year by Babu Rampada Chatterji together with some remanded cases of the Jamirapal Estate.

18. *Work of staff.*—Regarding the work of the officers of this settlement, I should like to repeat here an extract from my Inspection Note of August 1909, which shows under what conditions work was carried on and how well the staff responded to the heavy call made on it :—

"In conclusion, I desire to record my admiration of the whole-hearted way in which all the officers of the Midnapore settlement from the Settlement Officer down to the field establishments are endeavouring to carry out their work in spite of the most trying conditions of climate and environment. The camp officers with their establishments have been working

* *N. B.*—Dealt with in this Chapter for convenience.

throughout the hot weather and rains under canvas. Many of them have been repeatedly laid up with fever and all have had to endure extraordinary hardships. Most of the camps are now pitched in water-logged areas where the conditions are peculiarly trying. It was unfortunate that we had to continue the work of settlement throughout the hot weather and rains and make this heavy demand upon the health and energies of officers and men. It is most gratifying that with few exceptions they have responded to the call and stuck manfully to their work in spite of all difficulties. The good work done in this settlement by outsider Assistant Settlement Officers should be gratefully remembered by Government."

PHULHATTA ESTATE OF KHULNA DISTRICT.

17·66 square miles; 5 villages; 1,123 tenants; 7,631 plots.

19. *Completion of operations.*—After certain local enquiries the land revenue demand was finally fixed at Rs. 25,577, and the settlement rent-rolls, corrected according to the latest orders, were deposited in the Collectorate record-room.

SAMBALPUR MAHAL OF SAMBALPUR DISTRICT.

Area 2 square miles; tenants 331; plots 2,163.

20. *Progress.*—As this estate was not dealt with in Mr. Dewar's district operations, it was found necessary to undertake its survey and settlement during the year. It consists mainly of lands lying within the Sambalpur Municipality. The Deputy Commissioner was appointed Settlement Officer and was assisted by the Superintendent of Land Records. The work of survey, khanapuri, and attestation was completed within the year and the rent settlement proposals of the Deputy Commissioner have since the close of the year received the sanction of the Board. The whole of the work was most carefully supervised by the Deputy Commissioner, who has devoted much personal attention to it.

CHAPTER III.

[*See* Appendices I to VI.]

PERMANENTLY-SETTLED ESTATES.

FATEHSINGH AND OTHER ESTATES IN MURSHIDABAD DISTRICT.

94·67 square miles; 161 villages; 1,61,782 plots; 53,835 holdings.

21. *Completion of operations.*—Settlement operations in the three areas of Fatehsingh, Beldanga and Mahisar, were completed during the year. The principal items of work remaining to be done were disposal of arrears of case work, recovery of costs, preparation of the records for delivery to the Collector and compilation of statistics for the final reports. These items of work were duly finished and the final reports submitted. The Settlement Officer, Maulvi Muhammad Chainuddin, reverted in May 1909.

Some portion of the survey and settlement costs has been left for recovery by the Collector under the certificate procedure. In recovering the landlords' and tenants' share of the costs, no difficulty was experienced in Mahisar and Beldanga, but in Fatehsingh the work was badly managed by an Assistant Settlement Officer, who has been punished for his negligence, and a further difficulty has arisen in the refusal of the Jemua Babus, co-proprietors, to pay up their share of the costs. Certificates under the Public Demands Recovery Act were filed against them but the civil court issued a temporary injunction against the execution of the certificates and the matter is now pending the decision of the High Court on the question whether the civil court has any authority to issue such an injunction.

DIHI BHADRA ESTATE IN KHULNA DISTRICT.

71·51 square miles; 73 villages; 30,545 tenants; 1,15,559 plots.

22. *Progress.*—Babu Sharat Chandra Mukharji, Deputy Collector, was Settlement Officer under the supervision of the Collector. He was assisted by one outsider Assistant Settlement Officer.

The programme consisted of (1) completion of settlement recess work, (2) final publication of the record-of-rights, (3) computation and recovery of costs, and (4) case work. The first two items were finished and the major portion of the third, but case work has not made the progress that was hoped for, and the completion of the operations is not expected before the end of December.

Office work was hampered by the difficulty of obtaining clerical establishments in the unhealthy climate of Satkhira, and it was with the utmost trouble that the Settlement Officer got his records copied and finally published. The recovery arrangements were well considered and have been successful, little resort to certificate procedure having so far proved necessary.

Of the 730 applications filed under section 105, 517 were dismissed under section 188 of the Tenancy Act, because all the proprietors did not join in them. The orders dismissing these applications were upheld by the Special Judge and by the High Court on second appeal. One hundred and fifty-eight cases only were decided on their merits, forty-two cases being withdrawn or compromised. The enhancement of rent obtained by the applicants was very moderate. They did not take sufficient trouble to prove rise in prices and they were generally unable to prove excess area, while the raiyats in many cases sheltered themselves successfully under the fixed-rate presumption of section 50 (2).

Most of the suits under section 106 were transferred to the Civil Courts, as they involved complicated questions about the right to hold land rent-free or revenue-free.

A small Government estate called Labsa (tauzi No. 676) was surveyed and settled simultaneously with Dihi Bhadra, as it was intermixed with that estate. The Settlement Officer of Dihi Bhadra also prepared the records of an adjoining estate called Dihi Babulia which is under partition.

BIHAR SETTLEMENT.

23. *Staff and extent of operations.*—Mr. P. W. Murphy, I.C.S., was Settlement Officer from 1st October 1908 to 17th May 1909, when he went on special duty to write the final reports of Bhagalpur and South Monghyr, and was succeeded by Mr. J. A. Hubback, I C S. During the field season and for a portion of the recess, the Settlement Officer was assisted by four covenanted officers, Messrs. Hubback, James, Philip and Cullis. At the end of the field season, Mr. Philip went on leave, and during the latter half of the recess, Messrs. James and Cullis were transferred to general duty. The number of Assistant Settlement Officers, other than covenanted officers, varied from 47 in the field season to 22 in the recess.

The work of the Bihar Settlement extended to the following districts: (1) Purnea, (2) Bhagalpur (South), (3) Monghyr (South), (4) Patna and (5) Shahabad. A separate note regarding each of these is given below.

PURNEA DISTRICT.

3,737 square miles; 4,047 villages; 479,989 tenants; 25,48,356 plots.

24. *Completion of operations.*—All appeals were disposed of except one under section 105 which was remanded. The pending balance of settlement costs was recovered in full. Arrangements were made for handing over to the Collector the copies of the cadastral maps required for administrative purposes, but the maps are still in the custody of the Settlement Officer pending the final orders of the Board on difficulties raised by the Collector. The

C (Mauzawar) register prepared at settlement was revised and the tauzi index for the district was overhauled in order to locate and identify certain missing estates borne on the revenue-roll of the district. At the instance of the Collector, a small Government estate in the Kosi diara with an area of ·35 square miles was cadastrally surveyed and khanapuried during the year.

South Bhagalpur.

1,632 square miles; 2,568 villages; 150,732 tenants; 12,67,098 plots.

25. *Progress.*—The programme for the year was the completion and final publication of the records of 33 square miles, the recovery of costs for the whole area and the disposal of case work under sections 105, 106 and 40.

Recovery operations were postponed owing to the failure of the winter and spring crops, but a sum of Rs. 30,326 was collected from the principal landlords who wished to obtain their copies of the records early.

The enhancement of rent allowed in section 105 cases averaged 13 per cent. Of this at least one-half was imposed under section 52 in respect of excess lands reclaimed from hill and jungle, and the rest was allowed on the ground of rise in prices. The result of appeals in section 105 cases was satisfactory. Of the 98 cases disposed of under section 106, 34 dealt with money rent, 25 with status, and most of the rest with disputed possession.

Appeals against orders under section 40 were heard by Mr. M. C. McAlpin, I.C.S., who was appointed Additional Settlement Officer for the purpose after a decision of the Board that such appeals lie to the Settlement Officer and not to the Commissioner. Mr. McAlpin's orders did not interfere materially with the orders passed by the original courts.

South Monghyr.

Area 2,278 square miles; 2,352 villages.

26. *Programme.*—The chief items in the programme were the case work of 1,252 square miles surveyed in 1906-07, the attestation, objection and recess work of 925 square miles surveyed in 1907-08, the survey and attestation, where necessary, of an area of 33 square miles on the south bank of the Ganges omitted in the previous year, and computation of costs for the whole of South Monghyr, 2,278 square miles. The whole programme was carried out with the exception of 85 square miles left unattested for special reasons and a balance of recess work which will have to be completed during the present field season.

27. *Case work.*—Applications for settlement of fair rent under section 105 came in mainly from the estates of the Banaili Raj, the Darbhanga Raj and Mr. Grant. The large estates of Gidhaur and Khaira were dealt with chiefly under section 109C. Under section 105 rents were settled for nearly 10,000 tenancies, a rental of Rs. 1,46,000 being enhanced to Rs. 1,63,280 or by nearly 12 per cent. Of the increase, nearly Rs. 11,000 was imposed in respect of excess area, and Rs. 6,000 only on the ground of rise in prices. The excess area was heavy because much of the tract is hilly and jungly and reclamation is still in progress. A noteworthy feature of the operations was the volume of section 40 commutation work. Nearly 6,000 cases have so far been filed for the whole of South Monghyr. About 1,700 were disposed of during the year. More than 3,000 are still pending. Commutation was allowed in the great majority of disposed-of cases. The Additional Settlement Officer, specially deputed to hear the numerous appeals from orders passed in this and the previous year, disposed of 664 appeals, upholding orders in 373 cases and making minor modifications in 134, while 157 have been remanded, after reference of the point whether a previous refusal to commute acts as *res judicata*, a question answered by the Board in the negative. The Settlement Officer has shown that the expenditure on commutation cases considerably exceeds the court-fee receipts and has recommended that the fee be raised from 8 annas per tenancy to Rs. 2. Now that the work under the section is expanding and threatens to become a serious item in district administration, the

question of fees must be reconsidered. If the work be carried out on the present scale of costs, it will throw a considerable burden on the general body of landlords and tenants from whom settlement costs are recovered. If transferred, as proposed, to the Collector, it will add materially to the cost of district administration.

28. *Attestation.*—The chief difficulties of the season were connected with produce rents, section 109C proceedings in Gidhaur and Khaira, reconciliation of partition records in the Bishazari pargana, and illegal enhancements. The produce rent difficulty was common to the Monghyr and Patna work. On the whole the share of produce exacted by Monghyr landlords was less than in Patna but the lack of reliable papers and the prevalence of disputes were as pronounced in the one district as in the other. In the working of section 109C, the Khaira estate gave more trouble than Gidhaur. The Dhamna group of villages was completed in the course of the year, but the Bishunpur group has been left to be disposed of this field season. The returns show that during the past two years rents have been settled under section 109C to the extent of Rs. 4,46,000, the rental claimed by landlords amounting to Rs. 4,80,000. From these figures the relief that has been afforded to raiyats can only be partially estimated, as they have in addition been freed from liability to enhancement for a further period of 15 years. The strained relations previously existing between landlord and tenant have also been considerably improved. While these operations have avoided the necessity of resort to the drastic provisions of section 112 in Gidhaur and Khaira, there has been encountered in the property of Sukan Singh an area in which negotiations for compromise have failed and it has been found necessary to recommend to Government the application of section 112. The recommendation has not yet been disposed of.

29. *Record of proprietary interests.*—Considerable attention has been bestowed throughout the year on the reconciliation of the double record of proprietary interest contained respectively in the settlement khewats and the Collector's land registers. We have not yet found a solution but we are working towards one. The chief difficulty is connected with the record of area. If the areas entered in the Collector's registers are to be regarded as sacred and preserved unaltered, complete reconciliation can never be effected. Further light on the problem is expected to be thrown by the Tauzi index of estates which is being compiled by the Settlement Department for South Monghyr and will show, in addition to Land Register areas, existing areas and assets, according to the settlement records. Meanwhile the record of shares, apart from areas, is being compared in detail by a Sub-Deputy Collector of settlement experience specially deputed for the work, and the procedure that has been evolved during the past recess in Monghyr will be applied later to Patna and other districts that fall into the settlement programme.

30. *Objection work.*—Nearly 14,000 objections, averaging 1·25 per 100 plots, were filed after draft publication. They were taken up from the middle of March by 9 officers and disposed of by the end of June. About one-fourth were allowed and three-fourths disallowed. Most of them dealt with claims to hold at fixed rent and possession disputes. The number of produce rent objections was reduced by an arrangement which enabled the landlord to file a single objection for each village or group of raiyats on a consolidated court-fee of Rs. 5.

31. *Recess work.*—The work of the recess office was exceptionally heavy and could not be completed before the opening of the present field season. Between Monghyr and Patna the recess establishments had to deal with 26¼ lakhs of plots Every available muharrir with sufficient knowledge of the records was turned on to the work but the number of competent men is limited and much remains to be done during the cold weather months. The general progress of the settlement will not be delayed because final publication will still be possible at a date sufficiently early to admit of section 105 and 106 case work being taken up in the next recess. Several time and labour saving changes were introduced in the recess office in the course of the year, in particular an alteration in the methods of fair-copying and comparison. The precautions for check of the record were also increased.

Patna District.

1,956 square miles; 2,566 villages.

Survey.

32. *Field work.*—The survey and khanapuri programme covered the western half of the district, an area of 1,132 square miles, and was carried out in full. In addition 4½ square miles were surveyed topographically while 4½ square miles of municipal area and 6 square miles of previously surveyed area were surveyed cadastrally.

The work of survey was completed by the end of January and was fully checked, the total check working out to 4½ linear miles per square mile. In khanapuri 15·2 per cent. of the plots were tested, the check of Assistant Settlement Officers averaging ·74 per cent., as compared with ·24 last year. The average size of a holding was 1·97 acres and of a field ·37 acre. There were thus on an average 5½ plots to each holding. There was a partial reversion to the former Bihar practice of having the cadastral maps inked up by the amins instead of by special draftsmen at the circle head-quarters. Before the field season amins were trained and examined in inking-up, and those who passed were allowed to ink up their own maps. The work turned out was very satisfactory. Considerable difficulty was experienced in connecting up the cadastral survey along the south bank of the Ganges with the maps of the North Bihar survey. Difficulty was also experienced in dealing with the Sone diara areas on the Patna-Shahabad border, as it was found that the former revenue surveys of the two districts had not been reconciled.

The urban areas of Patna, Dinapore, Nizamat and Khagaul were surveyed in block. All the Municipalities of the district have now been dealt with in this way. Dinapore Cantonment was excluded from the operations.

33. *Disputes.*—Boundary disputes were fewer than in the previous year and were many of them frivolous. Internal disputes averaged 49 to the square mile as against 48½ last year. They were mostly concerned with produce rents. Mr. Hubback has protested against the opinion quoted in last year's report that in these disputes the truth on the whole lay rather with the landlords than with the raiyats, and that many of the latter were put up by the field staff to make false claims:—

"All this is true," he says, "but it is only half the truth. And so far as it is suggested that the prime cause of these disputes is to be sought generally or in a large degree in the machinations of the subordinates of this department, it is absolutely misleading. The fact is, that the tenants and landlords of the Patna district have been fighting about the *danabandi* system for some time past; the tenants have very real grievances against the system, and the landlords on the other hand have been trying to extend it by every means in their powers. High prices have put a further strain on their relations by accentuating the results of over-appraisement and high *bhaoli* rates. Under these conditions it is not surprising that the tenants have strained every nerve to prevent the entry of *danabandi* and in doing so they have no doubt put in many false claims. But I should like to point out that many of these are only technically false. We have had to record *danabandi* (appraisement) in many cases in which it has been introduced since the passing of the Tenancy Act. The tenants in asking us to record *batai* (actual division) or *nagdi* (cash rent) have only asked us to go back to the original *reway* (custom) of the village. I do not think that tenants' claims in such cases can be characterised as wholly false, even if they have thought it necessary to falsely deny that *danabandi* has ever been done in the village. And that the tenants' universal hatred of the *danabandi* system is an artificial creation of the amin and the settlement munsarim, I absolutely deny. It has existed and has been growing in intensity for years as is fully recognized by the Munsif of Bihar and the Sub-Judge of Patna (two officers with great experience of the district)."

34. *Recess work.*—Recess work was begun earlier than usual and completed successfully before the close of the year. Special attention was paid to boundary comparison, and the limit of negligible discrepancy in passing the areas of large villages was reduced from 1 per cent. to ½ per cent.

35. *Accounts and cost rate.*—A simplified system for the payment of field earnings was introduced at the beginning of the year. It saved a lot of trouble and the check applied to the accounts during the recess showed that no risks had been run. The cost rate of the Patna operations up to the stage of attestation has been ascertained to be Rs. 230-12 gross and Rs. 223 8 net per square mile. Of the former Rs. 207-2 is direct expenditure and Rs. 23-10 book debit

charges. The high cost rate is due to the excessive minuteness of plots, the extreme intricacy of the work and the abundance of disputes.

Settlement.

36. *Attestation.*—The settlement programme for the year included the attestation, draft publication, objection work and final publication of 811 square miles in the eastern half of the district. Attestation was finished by the end of April. The principal difficulties lay in distinguishing the cash-rent area from the produce-rent area, in determining the system of produce rent and ascertaining the legally payable rent, as distinguished from *abwabs*. I expect a special report on the whole subject from the Settlement Officer, who awaits the contributions promised by his three civilian assistants, Messrs. Hubback, Cullis and James. The provisions of section 106C. regarding the amicable settlement of rents, were applied wherever possible. Rents were settled under this section for 4,193 tenancies with an aggregate cash rental of Rs. 56,256 apart from produce rents. Mr. Hubback has drawn attention very forcibly to the way in which partition proceedings are utilized in Patna to effect illegal enhancements of rent. This subject was discussed at the last Commissioner's conference in Darjeeling and it was agreed that partition officers should be instructed to pay the closest attention not only to the apportionment of rent in partitioned holdings but also to the intimation of the apportioned rents to the raiyats concerned. The Settlement Officer's remarks have been separately communicated to the Board.

Special care was taken at attestation to reconcile discrepancies between the Collector's land registers and the settlement khewats prepared at khanapuri, but nothing has yet been done to revise the Collector's registers in the light of the information collected. It has been thought well to await the results of the similar comparison work now being done in Monghyr and to take up the Patna registers after the whole district has been finally published. In illustration of the ridiculous extent to which the subdivision of proprietary interest has been carried in Patna, Mr Hubback quotes a case in which the last fraction recorded represents $\frac{1}{200}$*th part of a square inch of land.*

Under the provisions of the Bengal Tenancy Act and the Tenancy Rules, 826 revenue survey villages were by amalgamation formed into 271 settlement villages, and 2 villages were by subdivision formed into 17 settlement villages. The object of these changes was to eliminate minute areas that were only villages in name and were unsuited to be administrative units and on the other hand to divide up large tracts of country that were included in one revenue survey number into areas that can conveniently be handled by District and Settlement Officers. Objections to the proposals were raised but were not pressed when the objects and results of the changes were explained. The proposals have since been submitted for the sanction of the Board.

Of irrigation records the Settlement Officer writes that "their effective attestation is not easy as they concern the whole village and are, therefore, regarded as nobody's business." During the year various improvements have been effected in the form and contents of these records. They are of the utmost importance in a district like Patna which is largely dependent on irrigation and they will become doubly important if the Private Irrigation Works Bill ever becomes law.

37. *Section 103A objections.*—Section 103A objections averaged 28 per square mile. About half of them were concerned with rent or status, which shows that 14 objections to the square mile were filed in matters dealt with at khanapuri. This may be compared with the average of 48 khanapuri disputes per square mile. 18 per cent. of the objections were allowed.

38. *Commutation cases.*—2,545 applications under section 40 were received and 258 were disposed of. There have been 178 appeals, which shows that the cases are being keenly fought. On account of the curtailment of settlement staff in the present field season, the Board have issued orders for the transfer of all pending section 40 cases to the Collector. It is expected, however, that their disposal will continue to be supervised by the Settlement Department.

39. *Cost rate.*—The Settlement Officer anticipates a cost rate of Rs. 238 for settlement work in Patna, but the figure must remain uncertain till work is complete.

Shahabad District.

4,373 square miles.

40. *Programme and field work.*—The survey and settlement of Shahabad were sanctioned in the Government of India's order No. 2—495—2, dated the 2nd January 1908. The programme for the year included the cadastral survey and khanapuri of thana Arrah, an area of 333 square miles, and was completed along with the similar work in West Patna. In addition 9 square miles were surveyed topographically. The total number of plots khanapuried was 489,767, averaging 1,470 to the square mile. There were 111,211 khatians, exclusive of under-raiyats, giving about 4½ plots and an average area of 1·91 acres to the holding. The personal and independent check of survey amounted to 3·69 linear miles per square mile, while 13·30 per cent of the plots were checked at khanapuri.

41. *Disputes.*—The number of boundary disputes was distinctly below the Bihar average. The most troublesome were those on the borders of the Patna district close to the confluence of the Sone and the Ganges. Internal disputes averaged 40 per square mile. A considerable number of these was between co-sharer proprietors in possession of separate portions of villages. Produce rent disputes were not so numerous as in Patna and Monghyr. Mortgages were very common and there were frequent disputes between mortgagors and mortgagees, each endeavouring to defraud the other. Claims of proprietors to hold land as raiyats were numerous. Suppression of raiyats was also extremely common. There are many under-raiyats, known as *banihars*, who are allowed the use of ploughs and bullocks by their raiyat-landlords, and do not appear to have any customary rights. As in Monghyr *kamiyas* are also found, who have sold themselves and their families in perpetuity to their masters. Cash rents are not expected to give much trouble as many raiyats hold on the *guzastha* system, a form of tenancy on fixed rate peculiar to Shahabad, while to others proper rent receipts are usually given. Produce rents are generally realised on the *danabandi* (appraisement) system, but the raiyats ordinarily have the right to claim division (*bhaoli*) of the actual crop, if dissatisfied.

42. *Khewat-writing.*—Khewat-writing was difficult owing to the minute subdivision of proprietary interests. Numerous small revenue-free estates also exist and the verification of these with the Collector's registers was a trying task, especially as the Collector's registers were found to be defective in various particulars. Revenue survey villages in Arrah thana are extremely minute and no less than 475 were amalgamated and formed into 127 settlement villages after due issue of notice.

43. *Cost rates.*—The cost rate of the cadastral, khanapuri and recess stages of work in Shahabad works out for the area completed to Rs. 203 per square mile as against Rs. 206 per square mile for Patna. The difference is less than might have been expected, considering that plots average 1,470 to the square mile in Shahabad as against 1,714 in Patna, but there was heavy expenditure on supplies and services which are partly debitable to the present field season and we must wait for the completion of the district or the major portion of it before we get the true cost rate.

SONTHAL PARGANAS.

Zamindari Estates. (Third Programme).

1,531·33 square miles ; 2,870 villages ; 96,945 tenants ; 14,62,227 plots.

44. *Programme.*—The main items in the programme for the year were, (1) the disposal of pending objections and appeals for 755 square miles ; (2) the attestation and rent-settlement of 827 square miles ; (3) the part-disposal of objections and appeals for the same area; (4) the sale of reproduced maps of previous programmes; (5) the replacing of missing trijunction stones; (6) the preparation of jurisdiction lists. The programme was carried out in full.

45. *Staff.*—Mr. H. Ll. L. Allanson, I.C.S., returned from leave in November 1908 and was Settlement Officer for the rest of the year. He was assisted by one Deputy Collector, six Sub-Deputy Collectors and one outsider Assistant Settlement Officer, all of whom were attached to this settlement for practically the whole of the year.

46. *Attestation.*—The attestation area was scattered over five subdivisions, the largest area being in Pakaur. The work presented no special difficulties save in the Sultanabad Pargana of this subdivision where the relations of the Sonthal village headmen with the estate had got into confusion through the notorious chicanery of the zamindars' tahsil establishments. The nominal arrears of the headmen would have ordinarily necessitated their wholesale dismissal but fortunately the estate came under Court of Wards' management at the beginning of the operations and the Settlement Officer with the help of the Deputy Commissioner was able to investigate thoroughly the headmen's accounts and to find that the arrears were not genuine. The Settlement Officer has summed up the situation as follows :—

"These big arrears in the account books of the estate were due to the laxity of the estate administration and to the ignorance of the headmen. Payments were always credited to past arrears, much of them time-barred. Even when decrees had been obtained, subsequent payments were credited to arrears that accrued prior to the years for which the decrees had been obtained. This system of account keeping when combined with dishonesty and deception on the part of the estate *amla* in their dealings with the *pradhans* and when carried on for a long term of years was bound to result in an enormous mass of mainly fictitious arrears."

47. *Rent settlement.*—An analysis of the rent settlement returns shows that classification is a trifle higher than in the previous settlement, but this was to be expected as the last settlement proportions of the best classes of land were abnormally low. The extension of *dhani* (rice) land amounted to 18 per cent. and of *bari* (non-rice) land to 11 per cent. At Mr. Craven's settlement, nearly one-third of the assessable rent was remitted for the period of settlement to avoid hardship to the raiyats and there was a general expectation that the remitted amount would be imposed at the expiry of the term. In practice, the revision of rents has been conducted under the rules applied in settling rents for previous programmes which dealt with Mr. Wood's settlements, and the rents now settled by Mr. Allanson are for the first five years actually less than Mr. Craven's assessable rent and from the sixth year only about 3 per cent. higher, although there has been a 15 per cent. extension of cultivation. The settled rents are, however, about 30 per cent. higher than Mr. Craven's settled rents and proprietors cannot complain of the amount of enhancement. As reclamation reaches its limit, they will gradually obtain the full assessable rent.

48. *Transfers.*—Raiyati lands were not transferable save in a few khas Bengali villages of the Pakaur subdivision. It appears from the returns that the number of illegal and objectionable transfers in the non-transfer tract was very small. Out of 3½ lakhs of acres, only 665 were found to have been sold, and 621 mortgaged. Some objectionable re-settlements, sub-leases and new settlements were cancelled but their number was not great. In striking contrast to these figures it was found that in the khas villages, where holdings were transferable, 25 per cent. of the total raiyati area had changed hands, the tendency being for the alienated lands to pass into the hands of wealthy cultivators, money-lenders and shop-keepers.

49. *Case and Appellate work.*—Over 4,000 objection cases of the first half of the programme were disposed of and the work of checking the records and arranging them for deposit with the Deputy Commissioner has made good progress. Over 6,000 objection cases of the second half of the programme were also disposed of and as the period for filing objections has been curtailed from 12 months to 6 months by the new Regulation III of 1908, the Settlement Officer has got in practically all the objections that will be filed. About 3,000 remain for disposal in the present year.

The Settlement Officer disposed of 909 appeals in the course of the year with results that were creditable to the trying officers. The Commissioner disposed of 97 appeals and reversed the orders of the Settlement Officer in four cases only.

50. *Sale of reproduced maps.*—Over 68,000 reproduced maps of the earlier programmes were sold to the raiyats in their villages at 4 annas a copy. The raiyats took the maps readily except in the Bengali khas villages of Rajmahal and Pakaur where one might have expected the reverse to be the case. A peripatetic staff was employed on the work of distribution.

51. *Preparation of jurisdiction lists and maps.*—It was decided after my visit to Dumka in February 1909 that the jurisdiction unit should be the bungalow in the Damin-i-koh, the sardari circle in the Dumka and Jamtara subdivisions, and the thana or independent out-post in the other four subdivisions. Considerable progress has been made with the preparation of the new jurisdiction lists, to which the Settlement Officer has given much personal attention, and skeleton jurisdiction maps have been sent for the greater portion of the district to the Bengal Drawing Office where the new jurisdiction maps are being compiled from the cadastral sheets. As the revenue survey maps of the district are hopelessly obsolete, the new jurisdiction maps, when ready, will supply a much-felt want.

Killa Bishunpur in Cuttack District.

Area 17·44 square miles; 42 villages; 24,351 plots.

52. *Progress.*—Killa Bishunpur is a permanently-settled estate in thana Tirtol of Cuttack. On account of the strained relations between the co-proprietors and their tenants, a survey and preparation of the record-of-rights were ordered under section 101 (2) (*b*) of the Bengal Tenancy Act. The Orissa Revision staff was entrusted with the work. Cadastral survey was started in February 1909 and completed in April. Khanapuri was also completed within the year. During khanapuri more than 20 per cent. of the total number of plots were checked by the superior staff and 10 per cent. by the inspectors.

All the surrounding estates having been previously surveyed, the boundaries previously laid down were followed in the present operations. One boundary dispute and 625 internal disputes were instituted and all were disposed of within the year. One of the chief difficulties of this settlement will be to determine the previously existing standard of measure, regarding which there is considerable dispute and confusion. The records were prepared for attestation which will be carried through in the present field season.

The Jagir Mahals of Puri District, including Parikud.

Area 140 square miles; 128 villages; 14,151 tenants; 57,927 plots.

53. *Completion of operations.*—The programme for the year consisted of the disposal of cases under sections 105 and 106 of the Bengal Tenancy Act and the winding up of the operations. Over 8,000 applications were filed under section 105, but of these about 3,500 were struck off, because all the co-sharers did not join. A test case has since been disposed of by the Special Judge of Cuttack which has made it desirable to re-open the rejected cases and it may be necessary to resume the work of fair rent settlement during the present year. In addition to the section 105 applications, over 1,500 applications were filed under section 40 and 129 suits were filed under section 106. The Settlement Officer has single-handed disposed of all the above case work in the course of the year and has submitted his final report at its close.

The enhancement of rent allowed in the section 105 cases works out to nearly 50 per cent., but the increase was allowed mainly in respect of excess areas held by ordinary tenants and of quit-rent areas held by privileged raiyats called *tankidars*. In addition a large number of service tenures were resumed and assessed at raiyati rates. The produce rents of 2,220 acres in Parikud were also commuted to money-rents on the application of the Court of Wards, at rates approximating to village cash-rent averages. As the general results of

the work will be discussed shortly in my review of the final report, it is unnecessary to discuss them further here.

CHOTA NAGPUR SETTLEMENT.

54. *Staff.*—Mr. John Reid, I.C.S., was Settlement Officer throughout the year. He was assisted by three Covenanted Officers, Messrs. Sifton, Collins, and Nelson, and by other Assistant Settlement Officers for varying periods, the maximum number being 33 during the field season and the minimum number 17 during recess.

The work of the Chota Nagpur Settlement extended to the three districts of Ranchi, Singhbhum and Manbhum.

RANCHI DISTRICT.

Area 7,128 square miles.

55. *Programme.*—The programme of the year consisted of (1) the cadastral survey, khanapuri and cadastral recess work of 1,211 square miles, (2) attestation, objection work and settlement recess work of 1,126 square miles, (3) final publication and computation of costs of 856 square miles, (4) case work under section 9A(3) of the Chota Nagpur Commutation Act of 1,618 square miles, (5) enquiries under section 118 of the Chota-Nagpur Tenancy Act, 1908, in part of the area completed previously, (6) recovery of costs in 2,666 square miles. The whole programme was completed with the exception of a small balance of office work which has been completed since the close of the year.

56. *Cadastral survey.*—The cadastral survey was completed in about three months. It was checked by 3,008 linear miles of partal, which gives an incidence of 2·8 linear miles per square mile. Defects in the traverse survey of some villages caused delay at the outset but were remedied by the Director of Surveys.

57. *Khanapuri.*—The preliminary record-writing including the decision of internal disputes was completed by 1st May. Disputes were unusually numerous, averaging 22 per square mile as against an average of less than 6 per square mile in the first five years of the Ranchi settlement. Of the disputes, the Settlement Officer writes as follows:—

"The greater number of the disputes were instituted in thana Mandar, where the relations of landlords and tenants are of a most unfriendly character. Disputes in this thana are so rife that, in fact, no tenant's land is safe. He may be deprived of it by a combination of either the raiyats or the landlord's party with very little chance of remedy. It is difficult to apportion the blame for this state of affairs. The proximity of the Ranchi Courts, where cheap legal advice is easily obtainable, the spread of Christianity amongst the raiyats and their consequent powers of combination, and the struggle for the land, which is valuable, are amongst the chief causes. The majority of the disputes were about *khas* possession of fields, the raiyats combining to seize the landlord's land, and the latter combining to oust the former from their raiyati holdings."

The check of khanapuried plots was sufficient. It averaged 15 per cent., of which 1·2 per cent. was done by Assistant Settlement Officers. Boundary disputes were numerous and many of them were frivolous. The cost of cadastral survey and khanapuri averaged Rs. 111·4 per square mile, which is slightly higher than last year, the increase being due to the heavy dispute work.

58. *Attestation.*—The area under attestation was a difficult one, especially in thanas Bero and Lohardagga. The disputes as to the incidence of rent, *rakumats* (prædial conditions) and *begari* (free labour) were more numerous and more difficult than in previous years. The Settlement Officer reports that the provisions of the new Act contained in sections 26 and 102 greatly facilitated procedure and that it was found necessary in many cases to have recourse to the proviso to section 105, as the landlords had, by continually adding to the amount and number of the *abwabs* and *rakumats*, imposed an excessive rent on the raiyats. A notable feature in the returns is the decrease in the number of non-occupancy raiyats. The proportion has dropped from 30 per cent. to 18 per cent. This marked decrease is due to the extension of the principle of the settled raiyat by the new Tenancy Act.

The average rates of rent per acre in the area attested were found to vary from Rs. 1 6-10 to Rs. 3-0-9 according to the thana and the class of raiyat. The rents of non-occupancy raiyats were generally higher than those of settled and occupancy raiyats. As soon as the provisions of section 61 of the new Tenancy Act became known, raiyats began to put in applications for the commutation of produce rents, and the practice usually followed in commutation was to take the mean between the average value of the produce rent and the average cash rent of similar land in the neighbourhood.

Out of a total of 7,20,640 acres in the attested area the *don* or low lands comprised 22·87 per cent, the *tanr* or upland comprised 36·72 per cent, and the jungle and waste 40·41 per cent.

59. *Landlords' privileged lands.*—A record of landlords' privileged lands was prepared under the powers conferred by section 119 of the Chota Nagpur Tenancy Act, throughout the attested area. Little interest was taken in the proceedings. The area recorded was small, 648 acres only, and no objections were made under section 83 or at any subsequent stage. After the completion of the attestation programme a notification was issued for the preparation of a similar record in previously completed thanas of the district. The work was taken up in the recess and has made considerable progress. The area of proprietor's privileged lands so far recorded is insignificant.

60. *Case work.*—The number of objections under sections 83 (1) and 111 (6) amounted to 9,954 and 812 respectively and all were disposed of before the end of August. There were only 13 suits under section 9A (8) of the repealed Commutation Act.

61. *Recovery of costs.*—Costs were recovered this year over an area of 2,666 square miles, and Rs. 3,16,213 were realised out of a total of Rs. 3,33,776. The balance is due mainly from proprietors who have promised to pay before the present month. Certificates have issued for Rs. 2,232 only.

62. *Deposit of records.*—The records of 2,666 square miles were deposited in the Collectorate during the year.

SINGHBHUM DISTRICT.

Dhalbhum Estate and Abhiram Tung's tenure in thana Monoharpur.

1,193 square miles; 1,692 villages 5,01,282 plots.

63. *Programme.*—The programme consisted of (1) attestation, objection and settlement recess work of 593 square miles, and (2) final publication and computation of costs for the previous year's area of 586 square miles. The programme was completed except for the computation of costs on which orders were received at the close of the year. The cadastral survey and khanapuri of 14 square miles comprised in Abhiram Tung's tenure in thana Monoharpur was also taken up in conjunction with the Barabhabhum operations by Mr. Sifton and 10 square miles of khanapuri in a boundary dispute of the Mayurbhanj border had to be done before the Settlement Officer could dispose of the dispute.

64. *Attestation.*—There were few disputes about rent or prædial conditions, and the chief interest of the work lay generally in questions regarding the status of headmen and khuntkattidars. The number of raiyats recorded as having khuntkatti rights was 2,058 as against 943 in the previous year. The area which was under attestation this year is the most jungly portion of the pargana and reclamation has been more recent than in the more developed area dealt with last year. The cultivated area is little more than one-fourth of the whole.

65. *Objections.*—Most of the objections under sections 83 (1) and 111 (6) were filed by the Midnapore Zamindari Co., to contest the rights of headmen and khuntkattidars. Many were of a frivolous character and most of them were disallowed.

66. *Ghatwalis.*—Ghatwali tenures are numerous in Dhalbhum and the Settlement Officer has given an account of their history which shows that

they were in their origin khuntkatti tenancies, and that under terms of the compromise of 1884 grievous wrong was inflicted on their holders. The question whether occupancy rights accrue in these tenures has been answered in the affirmative by the Settlement Department, but this decision is not accepted by all local officers. The Settlement Officer has made a special report on the whole ghatwali question to the Commissioner and it is to be hoped that the present operations will result in a satisfactory settlement of the many difficult questions connected with these tenures.

67. *Cost of operations.*—Apportionment proposals for the recovery of costs in Dhalbhum were submitted during the recess and have been disposed of after reference to the Commissioner. The cost rate works out to annas 7-2½ per acre and it has been decided by Government that, as in Ranchi, differential rates shall be levied for the different classes of land, the landlords to pay a four-sevenths share and the raiyats a three-sevenths share.

MANBHUM DISTRICT.

Pargana Barabhbum.

635 square miles; 597 villages; 4,33,166 plots.

68. *Programme.*—The programme consisted of the cadastral survey and khanapuri of the whole area, and the preparation of records for attestation, including map identification of ghatwali lands. The work up to this stage has been conducted under the provisions of the Chota Nagpur Tenancy Act, 1908, of which certain necessary sections were extended to parganas Barabhbum and Patkum under Notifications No. 5335, dated 22nd December 1908, and No. 162L.R., dated 12th January 1909.

Mr. J. D. Sifton, I.C.S., was Assistant Settlement Officer in charge of the survey and khanapuri operations and had under his control five Assistant Settlement Officers. A head quarters cadastral camp, in charge of Mr. Bedford, Professional Adviser, was maintained throughout the field season, at Barabhbum. The recess work was conducted at Ranchi.

69. *Field work.*—The cadastral survey was tested by 1,626 linear miles of partal, amounting to over 2·5 linear miles per square mile. The average size of a field was about nine-tenths of an acre. The combined khanapuri check amounted to 11 per cent., which is slightly below the prescribed standard. The check by Assistant Settlement Officers was only ½ per cent. but the percentage would have been higher, if classification check had been shown in addition.

70. *Disputes.*—Internal disputes averaged only 3 per square mile, but the Settlement Officer expects numerous disputes at attestation regarding rent and status. On an average one boundary dispute was raised in every two square miles. Many of these were frivolous and this was noticeably so in the case of disputes raised by the Midnapore Zamindari Company. Mr. Sifton decided an important boundary dispute between Parganas Barabhbum and Dhalbhum.

71. *Ghatwalis.*—There are 287 ghatwali tenures in the Barabhbum estate. Sixty-one of the tenancies consist of entire villages and the rest of part villages. The ghatwali villages were surveyed by the late Munshi Nundjee between 1,880 and 1883 and the particular lands declared under the compromise of 1883 to be ghatwali were defined on his maps. But his survey was not based on a traverse survey, and his maps are not sufficiently accurate for purposes of comparison. The difficulty of the Barabhbum settlement is the ghatwali question which has been a burning question for the last 30 years. Mr. Reid in his report has discussed the situation at some length but it would be premature to express an opinion until attestation has been completed, and all the facts are before us. At that stage it will be necessary to investigate khuntkatti claims and to settle many difficult questions of status and rent.

72. *Cost-rate.*—The cost of cadastral survey and khanapuri worked out to Rs. 117-4 per square mile as compared with Rs. 105-3 of the previous year in Dhalbhum. Apart from the heavy initial expenditure, the larger number of fields to the square mile, viz, 682 as against 394, is sufficient to account for the increase of rate.

CHAPTER IV.

[See Appendices I to X.]

REVISION SETTLEMENTS AND MAINTENANCE OF LAND RECORDS.

ORISSA REVISION SETTLEMENT.

73. *Staff.*—Mr. James Taylor, Deputy Collector, was incharge of the operations throughout the year. He was assisted by Messrs. Petter and Kelly, Deputy Collectors, and by 24 other Assistant Settlement Officers.

74. *General Progress.*—The revision settlement continued to make steady progress. The work was extended to thanas Jajpur, Dharamsala and Aul of the Cuttack District by notifications of October 1903 and now covers the greater portion of the Balasore and Cuttack Districts An area of 110 square miles in South Balasore had to be excluded from the programme on account of its repeated devastation by flood. This area has been included in the programme of the present field season. The table below shows the progress made in the chief items of work during the year, as compared with the previous year and the programme outlined in my forecast of March 1903.

	1907-08.	1908-09.	
		Programme.	Actuals.
Expenditure	Rs. 2,24,753	Rs. 2,36,317	Rs. 2,21,170
		(lakhs of plots.)	
Initial copying	28¾	21	19¼
Khanapuri	20¾	25	28¾
Attestation	12¾	19	18¼
Check and terij	13¾	19	12
Fair copying	13¾	19	8¼
Comparison	13¾	19	6¾
Final publication	10¼	19	8¼
Section 103 A cases ...	14,934 cases.	23,750 cases.	31,453 cases.
Section 105 cases ...	3,578 ,,	.....	3,799 ,,
Section 106 cases ...	167 ,,	.....	170 ,,

The work accomplished during the year up to the section 103 A stage is considerably in excess of last year, and is also in excess of the programme. Some ground has been lost in the recess programme, but this was unavoidable and will not impede the general progress of the settlement, as leeway will be made up during the cold weather months, arrangements having been made for the continuance of office work throughout the field season. Recess work was delayed by the late prolongation of work in the preceding field season and this was due partly to the heaviness of the programme and partly to the exceptionally broken nature of the weather which retarded attestation and objection work. It has been proved by our experiences in Bihar as well as Orissa, that when attestation is prolonged beyond April, objection work cannot be completed in time to enable the whole of the recess programme to be run through before the opening of the next field season. Proportionately to the programme included in my forecast of 1908, expenditure has perhaps been slightly in excess, but on the other hand receipts on account of court-fees, etc., are greater than anticipated, and I am confident that the net expenditure on the settlement will not exceed my estimate.

75. *Khanapuri.*—The work done covered 3,270 villages with an area of 1,628 square miles, containing 28,14,311 plots. The officers took the field in November 1908 and the work was completed by the end of May 1909. The

attention of the supervising staff was chiefly directed to new reclamations of waste lands, subdivisions of plots and encroachments on lands reserved for grazing and other public purposes.

76. *Attestation.*—Attestation started in the beginning of November and was not completed till July. The attendance of zamindars and tenants was on the whole satisfactory. The latter, as in previous years, evinced a keen interest in the work. The zamindars displayed much less hostility towards the operations than formerly. In the case of unauthorized reclamations the majority were persuaded by the attestation officers to accept reasonable *salami* from their tenants and settle the lands with them at rates approximating to village rates. They also took advantage of the operations to realize mutation fees on transfers, to which they are entitled by local usage up to a limit of 25 per cent. of the purchase money.

The amount of alteration that was found to have occurred in seven lakhs of holdings comprising 16⅔ lakhs of plots has been summarised by the Settlement Officer as under: Changes in name 48 per cent., changes in boundaries 46 per cent., changes in survey 10 per cent., wrong area extraction ½ per cent., other changes 34 per cent.

Special care was taken to check and correct the record of lands of the Public Works Department. The attestation officers co-operated in this matter with the various Executive Engineers concerned. Separate khatians were prepared for the lands of the different Government departments and public bodies, which in the previous settlement had been amalgamated in a single Kaiser-i-Hind khatian. The disposal of revenue-free claims threw a lot of work upon the attestation staff and the Settlement Officer, following the principles laid down for guidance in the previous settlement, found it necessary to do a certain amount of adjustment of the areas entered in the previous record.

77. *Draft publication.*—The records of 1,840 villages with 18,72,526 plots were draft published during the year. 258 villages were visited by the attestation officers during publication and the work was found to be satisfactory. The draft publication of 166 villages was done experimentally in the attestation camps with most favourable results. Attendance was good, the publication was done in the presence of the Assistant Settlement Officer, mistakes were put up at once for correction and unnecessary objections under section 103A were thus saved. The innovation was specially welcomed by the zamindars and their agents who are generally unable to attend draft publication in the villages. The Settlement Officer is strongly in favour of an alteration in the rules, whereby it should be left to the discretion of the attestation officer to publish in camp or in the village.

78. *Section 103 A objections.*—The number of objections filed was much larger than in the previous year, the percentage of objections per 100 plots rising from 1·16 to 1·76. The increase is ascribed by the Settlement Officer to the litigious character of the inhabitants of Salepur and Dhamnagar thanas. The work of disposal was begun in May 1909 and was not completed till the end of October. The Settlement Officer disposed of 350 applications for the revision of orders under section 103 A.

79 *Office work and final publication.*—I have already explained the failure to work up to the recess programme. The only other point of interest to note is that the work of copying and comparing was done on the lines lately introduced in Bihar. The new system is even more advantageous in Orissa than in Bihar, as there are five copies to be made instead of three. The Settlement Officer reports that the results were most satisfactory.

80. *Case work.*—Most of the cases under section 105 were filed by tenants for settlement of fair rents on new reclamation. Attendance of the proprietors was better than in the preceding year, and a large number of compromises was effected. The section 105 and 106 work has been held back by the more pressing urgency of the section 103A work. An attempt will be made to clear off arrears during the present cold weather. The Settlement Officer disposed of 5 applications under section 108 and of 376 under section 103A during the year. 620 new cases under section 40 were filed for commutation of produce rents and the number of pending cases is now 1,462. These cases were held up under orders of the late Commissioner pending the result of

Mr. Maddox's deputation to report on the Tenancy Law of Orissa. I dealt with the subject in a recent Inspection Note and proposed with the approval of the present Commissioner that the cases should now be proceeded with. Under the latest orders of the Board, they will be made over to the Collectors for disposal.

81. *Proprietors' private lands.*—I noticed in last year's report the baselessness of the zamindars' common complaint that their interests in lands of their own cultivation had been prejudiced by the action of the Settlement Department at the last and the present settlements. In Balasore it was found that the *nij-jote* (privileged) area had remained unchanged, while the *nij chas* (unprivileged) area had increased by 20 per cent. The zamindars of Cuttack appear to have been less grasping than the zamindars of Balasore, as the figures compiled for the former district show that both areas have there remained practically stationary. It is a sufficient commentary however on the alleged powerlessness of the zamindars to protect their own interests that even in Cuttack they have retained undiminished about 15,560 acres of unprivileged private land. Suppression of raiyats in these areas has, it is feared, been wholesale, and the Department is much handicapped in its efforts to protect the raiyats by the non-extension of section 178. In one case an influential zamindar of Balasore obtained a victory over his raiyats in the Special Judge's Court through their folly in taking a wrong line of defence. The case officer held that a kabuliyat in which the raiyat admitted certain reclaimed land to be *nij chas* and agreed to cultivate it as a labourer at Rs. 2 an acre was extorted by undue influence and was contrary to the facts. It was a contract for five years and contained the following clause: "Until the expiry of the term of this agreement I shall not be free to take service elsewhere; and if I do so, or keep the land fallow without cultivating it or do not properly cultivate it, you will prosecute me for breach of agreement and I shall be liable to be punished according to the provisions of the Indian Penal Code and besides will pay.....maunds of grain or its equivalent money value, Rs.....as compensation which can be realized from my moveable and immoveable properties, &c., &c.,....." An unconscionable contract, as admitted by the Special Judge, but on the evidence before him he found it impossible to maintain the finding of the case officer. According to the Settlement Officer the case produced an unfortunate impression amongst the tenantry of Balasore.

82. *Experimental maintenance of records in Orissa.*—One of the most important pieces of work done during the year was the maintenance experiment in North Balasore. At the suggestion of the Government of India the work of maintenance was tried experimentally without legislation over an area sufficiently large to throw light on the difficulties and probable cost of the work. The experiment was supervised by the Settlement Officer of Orissa, who supplied the necessary gazetted and ministerial staff from the training-ground of the revision settlement. The work covered the whole of the Sadar subdivision of the district, an area of 963 square miles with 2,312 villages containing nearly 3¼ lakhs of holdings and over 12 lakhs of plots. The staff consisted of one Assistant Superintendent (Babu Madhab Chandra Misra, Sub-Deputy Collector) specially selected for his physical activity, 5 Inspectors and 64 Recorders. The Recorders were nearly all nominees of the Union Presidents, and had been trained during the previous year in the revision settlement. They were paid Rs. 10, a month, and each was allowed a tindal on Rs. 4, a month. The recorders started field work from November 1st. They did not complete it till the end of August. They spent September and October at head-quarters doing clerical work and compiling crop statistics. The Assistant Superintendent spent the first three months of the season in field inspection. He then took up formal attestation. A second officer was deputed to assist him from the middle of May. They worked throughout the recess and by the close of the year had completed the attestation of 359 square miles, 1,050 villages, 1½ lakhs of holdings and 5 lakhs of plots, which was less than half of the programme.

I have discussed the difficulties and results of the work in two long inspection notes and do not propose to enter into detail here. The procedure followed was based on the lines laid down in the Government of Bengal's letter

No. 259 T.—R., dated the 28th September 1906. The experiment has proved that while there is some hope of attaining the standard of work laid down in that letter for Recorders, it is quite impossible to expect that the work of inspection, attestation and completion of records can be carried through on the lines proposed. The record can be maintained at the cost suggested in 1906 if maintenance be done according to Central Provinces methods, that is, if the guarantee for its accuracy be confined to field check by an inadequate inspecting agency, but we cannot prepare a record to which the presumption of accuracy that attaches to the original record, can be attached, unless we put it through all the safeguarding processes that are applied to the original, and these processes cannot be applied within the cost limits suggested in 1906. A record maintained as in Sambalpur may have the greatest value from an administrative point of view in areas where agrarian conditions are simple, but the majority of Bengal officers are agreed that a record so maintained would be of little use amidst the complicated agrarian conditions of the ordinary Bengal district. They all favour a fully attested record and, if they cannot have that, vote for the alternative of periodical revision.

Mr. Maddox, when on special duty in Orissa, inspected the maintenance work along with me and we consulted together regarding the provisions of the Maintenance Bill. I furnished him with alternative estimates of cost, which he has incorporated in his report to Government. The estimates are minimum estimates, and I cannot prophesy any reduction in their amounts. I am aware that the work had special difficulties to meet in its first year, from its novelty, the rawness of the field staff, and the experimental nature of the operations, but these difficulties were discounted in framing the estimates and it is impossible to expect a larger performance under normal conditions than has been anticipated.

The attitude of landlords and tenants towards the operations was all that could be desired. They were most popular amongst the raiyats but even the zamindars have begun to appreciate the advantages that are certain to accrue to them from the annual maintenance of records. Arrangements have been made to repeat the work during the present year in the Sadar subdivision and to extend it to the Bhadrak subdivision. In the former area we shall have the interest of seeing how progress will be affected by the experience gained in the past year. I recommend that no decisive orders be passed till we have before us the results of another year's experiment.

83. *Maintenance of land records in Sambalpur.*—The Deputy Commissioner, Mr. Moberly, has devoted much attention to the working of the patwari system and has made suggestions for its improvement, regarding which I have been in communication with the Commissioner of Settlements, Central Provinces. As a result proposals for certain alterations in the existing rules have recently been submitted to the Board.

The land records staff has undergone no material change during the year, but proposals for improvement of its status are under consideration. The Deputy Commissioner reports that the discipline of the subordinate staff has been on the whole satisfactory. Punishments have been fewer than in previous years. The check carried out by Revenue Inspectors was up to the normal standard and the inspection by superior agency was adequate. The results were on the whole satisfactory.

The maps of the Sambalpur settlement were inspected during the field season by the Director of Surveys and myself. They were found to be fairly accurate, allowing for the expansion and contraction that had occurred in the tracing cloth used by the patwaris. An experiment has been made by the Director of Surveys to find out whether these changes can be mechanically corrected, but it has been ascertained that the process would be unduly expensive, and it is considered advisable to let the correction await the next revision of settlement.

It has been suggested by the Deputy Commissioner that school boys in the district of Sambalpur should be given some instruction in the preparation and use of the settlement maps and records, as such instruction must be of great use to the sons of agriculturists. I communicated the suggestion to the Director of Public Instruction, who has taken up the matter enthusiastically and the Deputy Commissioner is now preparing a course of instruction which

will be included in the ordinary school curriculum. I am considering whether a similar course cannot be followed in other districts of Bihar, Lower Bengal, and Orissa which have come under survey and settlement.

Under instructions conveyed in the Board's No. 4813A., dated the 24th November 1906, to the Commissioner of the Orissa Division, the Deputy Commissioner was called upon to enquire regarding the exaction of *bhet-begar* or free labour from raiyats of the district by their zamindars and village headmen. He has submitted the reports of his subdivisional, *tahsil* and maintenance officers and recorded his own opinion as follows:—

"My own opinion is that in the zamindaris *bhet-begar* in excess of the scale permitted by the *wajib-ul-ars* (record-of-rights and duties) is often taken. As regards field labour this usually takes the form of a lax interpretation of the three-mile rule rather than that of extra exactions from any particular persons. Village areas run large in the more jungly tracts and the admissible *bhet-begar* is less than really needed for the zamindar's cultivation even when he owns a reasonable number of ploughs himself. Other items occasionally rendered are the cutting and supply of wood from the zamindari forests and the carrying of luggage. The zamindars occupy a feudal position and these services are ungrudgingly rendered. The limitations imposed on them by the *wajib-ul-ars* of 1892 (there was none before) have never been strictly enforced, and the incidents were never formally commuted. The practice is the survival of an old custom and the tendency is for it to decrease as people learn to resist it. The position of the *khalsa gountia* (headman) is inferior to that of the zamindar. He usually has as much *bhet-begar* as he needs. There is a tendency to abuse here, owing to some *gauntias* attempting to realize in cash what they do not need in kind. This practice is by no means a new one; but it is by no means universal. Attempts to put pressure on raiyats by refusing to receive rent are checked wherever met with—they are not usually in my experience connected with *bhet-begar*. Generally speaking, I do not think that hardship is felt; if it were, there would inevitably be complaints, whereas there are none, and in the absence of complaints it is difficult to take any action. In the majority of cases the relations between landlord and tenant are good and the extra labour is rendered as an act of grace."

84. *North Bihar mutation offices.*—The returns of the mutation offices established at Bettiah, Hajipur and Mahnar under the Land Records Maintenance Act, VII of 1895, show some improvement on the preceding year. 3,748 mutations were registered during the year against 3,028 in 1907-08 and the receipts from fees amounted to Rs. 403 against Rs. 320 realized last year. The total receipts including these fees were Rs. 1,282, while the total expenditure amounted to Rs. 3,492. The system of recording mutations by this agency thus continues to be unprofitable and unsuccessful.

85. *Record of mutations in Government and Wards' estates.*—Appendix VII gives a summary of the information received from district officers regarding the record of mutations in Government and Wards' estates for which a record-of-rights has been prepared. From the Government estate portion of the return I have excluded the large khas mahals of Khurda in Puri, Majnamutha and Jalamutha in Midnapore, and the Damin-i-koh in the Santhal Parganas, as for special reasons no mutation work was done in these estates during the year. On the whole, there is, I think, a general improvement in the work of mutation elsewhere, but the subject still calls for increased attention in the following districts, Midnapore, Gaya, Darbhanga, Bhagalpur, Monghyr, Purnea, Puri, and Hazaribagh. The record of mutations is less complete in Wards' estates than in Government estates. It is noticeably below the standard in the Wards' estates of Muzaffarpur, Champaran, Bhagalpur, Darbhanga, and the Santhal Parganas.

86. *Inspection of rent-rolls.*—In my last annual report it was suggested that different standards of check should be prescribed for superior and inferior agencies. The necessary orders were issued in Board's letter No. 3416A, dated the 15th September 1909. As these orders issued towards the close of the year, they have not been fully given effect to, although in most districts an attempt was made to differentiate between the different classes of inspection work before the orders issued. The information received from district officers has been embodied in Appendix X. The amount of inspection appears to be generally adequate, but I must confess that on a careful examination of the returns I find it difficult to convince myself that they have in all cases been prepared intelligently. When the Board's circular was under consideration, it was represented that a percentage of 10 per cent. for superior check would be difficult of attainment. From the present return it will be seen that 100 per cent. has been attained in many cases. The Wards' returns are even less

intelligible than the Government estate returns. It seems somewhat anomalous for example that in the Hathwa estate of Saran, the check by superior agency should amount to 37 per cent. while the check by tahsildars and inferior agency should be 31 per cent. only. The same will be noticed of Ranchi, where in one case the superior check averages 182 per cent. Anomalies of the above nature may be capable of explanation but they have not been explained I recommend that in future more attention be bestowed by district officers on these returns to ensure that they be prepared intelligently by their offices and that adequate explanations be offered of figures that at first sight are remarkable.

CHAPTER V.

Utilization of Land Records.

87. I dealt at some length with this subject last year and do not propose to repeat in the present report. It would be tedious to summarize the testimony to the utility of settlement maps and records that has come from the Collectors and Deputy Commissioners of all districts that have been surveyed and settled, and I am doubtful whether it is any longer necessary to require annual reports on the subject from District officers. The uses of the records and maps are detailed in the Settlement Manual and are too well-known to officers engaged in mofussil administration to require annual recapitulation at their hands. In a country where agricultural interests bulk more largely than all other interests combined, it may be taken for granted that the correct record of those interests is all-important to the great mass of the population. In Bengal the ignorance of the cultivating classes renders the record doubly important, and it may truly be said that the operations of settlement, wherever they have spread, have conferred an inestimable boon on the illiterate masses. They form a tower of defence to them against the cupidity of those members of the educated minority, who make a practice of preying upon their weaker neighbours. Striking testimony to the above effect has come in the present year as a result of the special enquiry regarding the usefulness of settlement records undertaken at the instance of His Honor the Lieutenant-Governor in the backward division of Chota-Nagpur. Not the least remarkable portion of that testimony came from the bigger zamindars and their agents, who conceded that the work was abundantly justified by its results, though the process might not be altogether pleasant.

88. It will much enhance the value of settlement records if two measures be kept steadily in view. The first is the education of the people and of officials in the nature of their contents and the second is their up-to-date maintenance. I have elsewhere put forward a suggestion that the maps and records should be explained to the younger generation, an elementary knowledge of their mode of preparation and contents being included in the curriculum of all vernacular schools. As regards officials, the process of education continues to receive attention and though much still remains to be done, much has already been accomplished. The large gazetted staff employed each year on settlement ensures a leaven of knowledge amongst executive and revenue officers. The special training of civilians has been limited to officers of two years' standing and it will be years before acquaintance with the record of agrarian conditions will be as universal and thorough as might be desired amongst the officers who have a first place in their administration. In the sister province the training is extended to junior members of the provincial and subordinate executive services and it is to be hoped that this example will soon be followed in Bengal. Meanwhile the acquaintance of judicial officers with settlement records is yearly improving as a result of the annual deputation of a number of munsifs for survey and settlement training and the working of those provisions of the Bengal and Chota Nagpur Tenancy Acts which emphasize the importance of the records. The attention of District Judges was drawn by Circular letter of the Hon'ble High Court issued during the year to sections 147A, 147B and 148 of the Bengal Tenancy Act, added by the amending Act of 1907.

Regarding the up-to-date maintenance of settlement records, an account has been given in another chapter of what has been already attempted and accomplished in Orissa and elsewhere. A complete programme for the revision of the North Bihar records has been submitted in the course of the year. The necessity for early initiation of the work has been emphasized by the Collector of Champsran, who, while testifying to the value of the records, has pointed out how much more useful they would be if now revised and brought up to date.

CHAPTER VI.

[See Appendix XL]

Maintenance of Boundary Marks.

89. *General*.—The reports on the maintenance of boundary marks that have been received this year from district officers show that the subject is receiving their careful attention and that they are taking generally adequate steps for their inspection and maintenance. In the Government resolution on the report of last year, the importance of the work of inspection was emphasized and attention was called to the deficiency in the restoration of damaged or missing marks. The reports for the present year still disclose a certain amount of deficiency, and explanations of this have not always been given. The note below summarizes most of the specific items of work that have been done in the different divisions. Details of the results of inspections will be found in tabular form in Appendix XI.

90. *Burdwan division*.—In Burdwan special attention was given to the boundary marks of the Grand Trunk Road and camping grounds. Rs. 32 were stated in May to have been spent on the restoration of 17 stones, but the Collector has not explained why no steps were taken to repair the 54 damaged stones shown in his statement of November. One prosecution is reported from Katwa, but the case is still under trial. 20 new stone pillars in thana Katugram of the Katwa subdivision were erected by the Settlement Officer of Fatehsingh. In Birbhum district, out of 14 stones found to be damaged or missing four were restored in Government estates; no action was taken in zamindari estates. In Bankura, one damaged pillar which remained over from last year was repaired. The Collector of Midnapore has been instructed to treat the boundary marks of Pataspur and Sujamutha, which are burnt clay cylinders, as permanent marks. A complete examination of the boundary marks of the recently surveyed Nayabasan and Rohini estates was made by an Assistant Settlement Officer. Missing trijunction stones were replaced and maps and registers were prepared for the use of the Collector. Maps and registers are also in course of preparation for the Jhargram, Jallemutha and Majnamutha estates. In Hooghly 6 new permanent marks were erected in 3 Government estates, but the Collector has not explained why no steps were taken to replace 7 marks found to be damaged or missing. In Howrah 84 stone pillars were erected in 48 diara villages of the Damodar river. 18 new masonry boundary pillars were also erected on the northern borders of the Uluberia subdivision. All these marks have been duly inspected.

91. *Presidency division*.—Missing marks have been partially restored in the 24-Parganas and it is reported that of 350 pillars required for the Panchannagram estate, 200 have been obtained and 150 more indented for. These are to be embedded in the present cold weather. In Nadia 1 estate was demarcated with 12 new pillars and 39 out of 53 marks found damaged or missing were restored. The rest will be restored this year. In Murshidabad, the Settlement Officer of Fatehsingh, Beldanga and Mahisar made over to the Collector the necessary maps and registers prepared for the maintenance of the marks erected in those estates. In the Government estates 2 pillars reported to be missing have been restored, but damaged pillars have not been repaired or replaced. 9 out of 33 missing or damaged marks of zamindari estates were restored by the Settlement Officer of Fatehsingh, but no action was taken regarding the rest. In Jessore, 81 new marks were erected during

the year in 3 private estates. 10 marks cut of 21 found to be missing or damaged were restored. In the Dihi Bhadra estate of Khulna 168 new boundary pillars were erected during the year by the Settlement Officer, who made over to the Collector the necessary maps and registers for their maintenance. Rupees 50 was spent on the erection of boundary marks to prevent encroachment in Sunderban estates.

92. *Patna division.*—In Patna district the Settlement Officer of Bihar had the traverse trijunction stones checked during attestation. Out of 162 stones checked 140 were found to be in their proper places while 22 were either incorrectly placed or missing. These were set right or replaced. A sum of Rs. 66 was realized from occupants of adjoining lands under section 56 of the Survey Act, and one Inspector was punished for neglect of his duties at khanapuri. The Collectors of Patna and Gaya confined attention to Government and Wards' estates. 2 pillars found damaged in Patna will be replaced this cold weather. Stones have been indented for to replace the missing marks of the Gaya Wards' estates.

93. *Tirhut division.*—Under the Board's order No 1531A, dated 19th March 1907, the work of inspecting and checking boundary marks in the private zamindaries of this division has been held in abeyance pending the inception of revision settlement operations and attention was consequently confined to Government and Wards' estates. In the Bettiah estate of the Champaran district, Rs. 2,400 was spent on the work of restoring the numerous marks found to be missing during the last 2 years. Much still remains to be done in the Wards' estates of Sarau district. Rs. 67 was spent in replacing missing stones of the Sitamarhi subdivision of Muzaffarpur and proceedings were taken under the Survey Act against 4 proprietors who were fined Rs. 100. One criminal prosecution was not attended with success. In Darbanga only 19 out of 62 missing stones of the Na-han estate were replaced. The Collector has called for a report regarding the remainder.

94. *Bhagalpur division.*—North of the river, save in Purnea, the same conditions apply as in Tirhut and the same orders are applicable. In Bhagalpur some boundary marks of Government estates have been repaired or replaced at the cost, where possible, of parties found responsible for their disappearance, but no action has been taken in respect of Wards' estates pending receipt of registers and maps from the Settlement Department. In South Monghyr, the traverse trijunction stones were checked at attestation. 15 out of 161 stones were found to be missing. The missing stones were replaced by the attestation officer and the cost realized from the occupants of the neighbouring fields. In one case proceedings were taken under section 53 of the Survey Act and the guilty persons fined. The Settlement Officer of Bihar suggests that if fairly substantial costs are imposed under section 56 of the Survey Act in all cases in which the district staff find a stone out of place the persons occupying fields adjoining boundary stones will soon realize that it is their duty to see that the stones are not tampered with. In the khas mahals of Darjeeling, the raiyats are responsible for the maintenance of boundary marks and repairs are made by them. In the Sonthal Parganas, the headman or the agent of the zamindar, according as the village is pradhani or khas, is responsible for the proper maintenance of boundary stones. The rules approved by Government in 1907 have not yet been applied by the Deputy Commissioner as he has just begun to be furnished with maps and registers by the Settlement Officer. Before making over the maps and registers the Settlement Officer found it necessary to make a complete verification of traverse trijunction stones. 3,900 missing stones were replaced throughout the district during the year at a cost of Rs. 2,813 met from settlement funds and the work will be completed this cold weather. There were 2 successful criminal prosecutions in each of which one month's rigorous imprisonment was awarded and Rs. 49 was realised in fines from headmen. The Settlement Officer is entitled to special credit for the care bestowed on this troublesome piece of work.

95. *Orissa division.*—In Orissa nothing was done in the direction of boundary stone inspection and maintenance save by the revision settlement staff and the Deputy Commissioner of Sambalpur. In Balasore 2,592 marks were inspected, the number found damaged was 38 and missing 171. 195

in all were restored. In Cuttack, 6,824 marks were inspected and 1,452 were found to be damaged or missing. 1,354 were replaced, 21 had disappeared into rivers or the railway line, and the remainder will be replaced shortly. In Sambalpur the subject received special attention from the Deputy Commissioner, at whose instance a revised circular, fixing the responsibility of the village *mukaddams* and *patwaris*, was issued in the course of the year. 284 stones were reported to be missing or damaged, and of these 256 were replaced. The whereabouts of the rest could not be traced as they fell in hill and jungle land. The Deputy Commissioner expects even better results next year when the revised circular will be in operation for the whole period.

96. *Chota Nagpur division.*—Out of 864 boundary marks in 3 Government estates in Hazaribagh 42 were found to be damaged or missing. The Deputy Commissioner has arranged for the repair of 16 and the rest will be dealt with by the Settlement Department. In Ranchi the boundary marks of recently surveyed and settled areas have been placed in the charge of chaukidars, but no record has been kept up to date of the results of inspections. A record will be kept from the present year. In Palamau boundary marks of the Government estates are systematically inspected by the mutation *peshkars* on tour, who arrange through the headmen for the restoration of missing or damaged stones. *Mujmilli* maps have this year been prepared, which will be of great assistance in the work of inspection. In Manbhum there is no proper record of boundary marks, but the ghatwali stones are, as a rule, carefully maintained by the ghatwals in their own interests. Boundary marks have been erected in the course of the year in pargana Barabhum during the survey operations and will be re-checked at attestation this cold weather. The Deputy Commissioner of Singhbhum has given attention to the boundary marks of the Kolhan Government estates, both inter-village and on the borders of adjoining estates, and taken steps to have missing and damaged stones restored. He has also pressed on the attention of the Porabat proprietors and the owners of the connected sub-estates the necessity of keeping their boundary marks in order, and something in this direction has been accomplished. In the Dhalbhum estate, the trijunction stones were checked at attestation and complete registers and maps have been made over by the Settlement Officer to the Deputy Commissioner, who is now about to distribute the charge of the boundary marks amongst the ghatwals and others responsible for their maintenance. The Deputy Commissioner has displayed much interest in the work.

CHAPTER VII.

Charge and Tours of the Director and Notice of Officers.

97. *Charge.*—I was in charge of the Department throughout the year.

98. *Tours.*—In November 1908 I inspected the Orissa revision settlement. I visited Chaibassa in connection with the Kharsawan and Seraikella settlement and inspected the operations in Khulna and Ranchi during December. In January and February I inspected survey and settlement work in Bihar, Midnapore, Sonthal Parganas, Murshidabad and Orissa. I also visited Sambalpur in the beginning of February along with the Director of Surveys to inspect the maintenance maps. In March and April I inspected the operations in Chota Nagpur, Orissa and Bihar. I made a longer rains tour than usual in July, August and September and inspected the recess work in Chota Nagpur, Bihar, Midnapore, Orissa, Khulna and the Sonthal Parganas. I paid a short visit to Chinsura in September to advise regarding the Hooghly petty settlements which have since been entrusted to my supervision. I was on tour in all for 183 days during the year.

99. *Notice of officers.*—I am indebted to all the officers who were in control of major settlements for the ability with which they administered their charges during the year. The Bihar Settlement had the heaviest programme, both field and recess, that it has yet had to tackle. Mr. P. W. Murphy, I.C.S., ran the field work successfully, and in his management of the recess office

Mr. J. A. Hubback, I.C.S., showed that he was fully qualified for an independent charge. Messrs. Cullis, James and Philip all did good work as Assistant Settlement Officers in charge. The transfer of the first named to Secretariat duty is a loss to the Bihar Settlement. Mr. J. Reid, I.C.S., has carried the Chota Nagpur Settlement successfully over the difficult period of transition following the introduction of the new Chota Nagpur Tenancy Act. He has been ably supported by Mr. J. Sifton, I.C.S., who held semi-independent charge of Barabhbhum. Messrs. Nelson and Collins also did good work during the field season. The reversion of the latter to Secretariat duty is another loss to the Department. Mr. H. Ll. L. Allanson, I.C.S., has continued to administer ably the Sonthal Parganas Settlement, which is now approaching completion. Mr. J. Taylor, Deputy Collector, has for a second year run the Orissa Revision Settlement with much credit. Mr. C. W. Hodson, now Assistant Superintendent of Police, displayed his usual energy in the supervision of his scattered charge in Midnapore. His transfer to the Police Department at the close of the year is a third loss to the Department. Very good work was done by Babu Sudarsan Das, Deputy Collector, in the Parikud Settlement, and the Department has a fourth loss to chronicle in the transfer of Maulvi Muhammad Chainuddin to Eastern Bengal and Assam after the completion of his labours in the Murshidabad Settlements. Messrs N. Bedford and J. H. Murphy of the Survey of India both did useful work as Professional Advisers of the Chota Nagpur and Bihar Settlements. My personal assistant, Babu Charu Chandra Kumar, has continued to perform his duties in the Calcutta office most efficiently.

The following officers* have been selected for special mention from this year's reports though many others have done very good work and it is perhaps invidious to discriminate :—

Deputy Collectors.

1. Babu Nilmani Dey.
2. „ Suresh Chandra Chakrabatti.
3. Mr. D. McLeod Smith.
4. Maulvi Shamsuddin Haider
5. Babu Akhouri Gopi Kishore Lal.
6. Babu Bhuban Mohan Chatarji.
7. Mr. P. M. Robertson.
8. „ W. J. Kelly.
9. Babu Rampada Chatarji.
10. „ Sharat Chandra Mukharji.

Munsifs.

1. Babu Saroj Mohan Das Gupta.
2. „ Amar Nath Chatarji.
3. Babu Lakshmi Narain Patnaik.
4. „ Brajendra Kumar Ghosh.

Sub-Deputy Collectors.

1. Pandit Lakshmi Misra.
2. Babu Karali Charan Gangadi.
3. „ Surendra Nath Banarji.
4. „ Jatindra Kumar Ray.
5. „ Satamanyu Mukharji.
6. „ Shamsher Jang Bahadur.
7. „ Surendra Nath Sen.
8. „ Haridas Ray.
9. Mr. H. McPherson.
10. „ F. H. Alderson.
11. Babu Rajani Kanta Sen.
12. Maulvi Anwar Karim.
13. Babu Jatindra Narayan Mukharji.
14. „ Surendra Nath Sarkar.
15. „ Radha Charan Das.
16. „ Madhab Chandra Misra.
17. „ Uma Charan Das.
18. „ Basanta Kumar Ray.
19. „ Surendra Nath Bhattacharji.
20. Maulvi Syed Dilwar Ali.

Others.

1. Babu Harihar Banarji.
2. „ Ramesh Chandra Ghose.
3. „ Satis Chandra Ghose.
4. „ Daitari Misra.
5. Babu Akshay Kumar Mukharji.
6. „ Bhubaneshwar Sanyal.
7. „ Mahendra Nath Sarkar.
8. „ Pashupati Ghose.

* NOTE.—Since the list above was prepared, it gives me much pleasure to note that of the Sub-Deputy Collectors mentioned, Babus Surendra Nath Sarkar, Surendra Nath Sen and Jatindra Narayan Mukharji have been promoted to be Deputy Collectors. The promotion list also includes two former officers of the Bihar Settlement, viz., Babus Baijnath Sahai and Mahendra Nath Gupta. It is a matter of regret to me that none of the outsider Assistant Settlement Officers have received any similar recognition for their services.

On the reverse side of the shield I regret to have to note that four Sub-Deputy Collectors of the Chota Nagpur Settlement and one Sub-Deputy Collector of the Murshidabad Settlement were specially reported to Government for bad work. They were suitably punished for their neglect of duty.

It remains to me to chronicle that two very promising young officers, Mr. Charu Chandra Chakrabutty, Deputy Collector of the Bihar Settlement, and Babu Jyotish Chandra Maitra, Sub-Deputy Collector of the Orissa Settlement, succumbed to illness contracted during the last field season. Their deaths were much regretted by their Settlement Officers and myself.

100. *Relations with other Departments.*—The officer with whom my work brings me most closely into contact is the Director of Surveys. Major Crichton, C.I.E., has been in charge of the Department throughout the year. Our relations have been most cordial and our joint work has been carried on most harmoniously. I desire also to acknowledge gratefully the help that I have received from the Commissioners and District Officers with whom the work of the Department has brought me into touch. It is most helpful to the officers of settlement when local officers take an interest in their work. At the last Commissioners' conference it was considered whether anything could be done to strengthen the connection between district and settlement work, and it was agreed that we could not do better than follow closely the principles already laid down for guidance in the Settlement Manual.

I have the honour to be,

SIR,

Your most obedient servant,

H. McPHERSON,

Director of the Dept. of Land Records, Bengal.

APPENDICES.

[*N.B.*—Figures in these Appendices which do not agree with those in last year's Report are revised figures.]

Division and District.	Name of estate or tract under settlement.	Date of inception of operation.	Estimated area, in square miles, under settlement.	Total number of villages.	Area cadastrally surveyed in square miles.			Area in which records have been prepared for attestation—		
					Up to the end of the preceding year.	During the year.	Total	Up to the end of the preceding year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11
										I.—Settlement of
Presidency.										(a) *Government*
Khulna	Labsa, No. 676 ...	1st Nov. 1906	·13	...	·13	...	·13	·13	...	·13
										(b) *Temporarily*
Burdwan.										
Midnapore ...	Jellamuths, Majmamuths, and other estates.	8th Oct. 1903	809·96	1,463	509·74	0·22	509·96	409·26	10·70	389·96
Orissa.										
Sambalpur	Saa balpur Mahal	1st Feb. 1909	2	1	...	...	...	...	2	2
										II.—Other
Burdwan.										(a) *Ori*
Midnapore ...	Dipkisorehand, Jamirpal, Nayebasan, and Kobini.	8th Oct. 1903	468·21	1,469	468·21	...	468·21	439·63	27·58	468·21
	Bhagaran and Ghaira	7th July 1905								
	Other petty estates	24th Jan. 1906								
		8th Oct. 1903								
Presidency.										
Murshidabad ...	Fatehsingh ...	25th Nov. 1904	80·39	197	80·39	...	80·39	80·39	...	80·39
	Beldanga ...	10th Nov. 1905	11·61	1	11·61	...	11·61	11·61	...	11·61
	Mahisar ...	16th April 1907	2·47	3	2·47	...	2·47	2·47	...	2·47
Khulna	Dhi-Bhadra estate	1st Nov. 1906	71·28	73	71·28	...	71·28	71·28	...	71·28
Patna.										
Patna	Patna District ...	1st Nov. 1906	1,956	2,506	814	1,142	1,956	811	1,132	1,943
Shahabad	Shahabad District	Nov. 1903 ...	4,373	Not known	...	333	333	...	333	333
Bhagalpur.										
Monghyr	South Monghyr ...	October 1906	2,372	2,353	2,136	23	2,179	2,154	25	2,179
Bhagalpur	South Bhagalpur	October 1906	1,633	2,568	1,633	...	1,633	1,633	...	1,633
Purnea	Purnea ...	October 1903	3,737	4,407	3,737	...	3,737	3,737	...	3,737
Santhal Parganas ...	Zamindari estates (3rd Programme.)	October 1906	1,581·33	1,870	1,579·29	2·04	1,581·33	1,579·29	2·04	1,581·33
Orissa.										
Cuttack	Kille Bishanpur	5th Oct. 1906	17·44	43	...	17·44	17·44	...	17·44	17·44
Puri	Parikud ...	9th Dec. 1906	140	123	140	...	140	140	...	140
Chota Nagpur.										
Ranchi	Ranchi District	1st Mar. 1909	7,128	Not known	5,806	1,311(c)	7,109	6,598	1,308(d)	7,106
Manbhum	Pargana Barabhum.	25th Oct. 1906	635	597	...	635	635	...	634	634
Singhbhum ...	Dhalbhum ...	1st Sept. 1906	1,179	1,686	1,179	...	1,179	1,169	10	1,179
Ditto ...	Moncharpur tenure.	1st Nov. 1906	14	6	...	14	14	...	14	14
Orissa.										(b) *Rem*
Cuttack	Cuttack ...	22nd Jan. 1906	2,400	5,091	568·15	1,457·56	1,995·71	568·15	1,457·56	1,995·71
Balasore	Balasore ...	22nd Sept. 1906	1,718	3,605	1,397·91	200·97	1,598·88	1,397·91	200·97	1,598·88
										(c) *Keeper*
Balasore	Balasore, Sadar ...	1st Nov. 1906	962·76	2,313	962·76	...	962·76	...	947·93	947·93
	Total ...		30,592·36	30,999	21,393·24	5,008·72	26,314·97	20,123·48	6,009·73	26,160·14

(a) Cost (Rs. 79)
(c) Includes 3 square miles of
(d) Excludes ditto.

DIX I.

during the year ending 30th September 1909.

SQUARE MILES.													
In which attestation has been completed—			In which draft publication has been completed.			In which final publication has been completed—			Cost of operations.			Total cost-rate in the operations shown as completed in this return.	
Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Estimated.	Actual.
12	13	14	15	16	17	18	19	20	21	22	23	24	25
LAND REVENUE.									Rs.	Rs.	Rs.	Rs.	Rs.
Estates.													
'13	—	'13	'13	...	'13	...	'13	'13	...	(a)	(a)	...	...
Inam Estates.													
499·26	10·48	509·74	499·26	10·48	509·74	106·05	62·24	168·29	2,67,679	...	2,67,679	...	...
...	2	2	...	...	...	...	...	...	...	113	113	...	...
SETTLEMENTS.													
Final.													
304·38	107·83	412·21	277·50	104·71	382·21	235·46	141·24	206·70	1,36,834	...	1,36,834	...	...
80·29	...	80·29	80·29	...	80·29	80·29	...	80·29	21,943	...	21,943	...	...
11·61	...	11·61	11·61	...	11·61	11·61	...	11·61	10,700	...	10,700	...	...
2·47	...	2·47	2·47	...	2·47	2·47	...	2·47	3,009	...	3,009	...	...
71·38	...	71·38	71·38	...	71·38	...	71·38	71·38	38,679	(b) 17,954	(b) 56,154	...	...
...	311	311	...	311	311	...	76	76	...	1,33,331	1,33,331	...	...
...	...	...	...	...	...	...	...	...	...	67,466	67,466	...	...
1,323	86	2,009	1,319	265	1,584	462	807	1,269	1,33,464	1,39,667	2,73,631	...	...
1,590	33	1,623	1,590	33	1,623	1,366	244	1,623	2,78,430	20,128	2,98,563	...	...
2,737	...	2,737	2,737	...	2,737	2,737	...	2,737	6,46,554	567	6,46,121	...	176
754·63	837·30	1,591·93	...	...	...	754·63	837·30	1,591·93	2,12,331	76,134[1]	2,88,465	260	200
...	...	...	...	...	...	...	...	...	...	3,463	3,463	...	...
140	...	140	140	...	140	140	...	140	32,513	19,166	51,679	...	...
4,777	1,126	5,903	4,777	1,126	5,903	2,920	956	4,776	10,06,963	2,15,464	12,22,413	...	...
...	...	...	...	...	...	...	...	...	...	77,000	77,000	...	...
686	393	1,179	686	393	1,179	...	686	686	1,07,653	43,646	2,51,300	...	...
...	...	...	...	...	...	...	...	...	...	1,645	1,645	...	...
Final.													
...	650·78	650·78	...	650·78	650·78	...	...	...	3,65,389	2,31,170	5,96,559	...	...
1,393·97	204·91	1,598·88	1,393·97	204·91	1,598·88	772·78	567·60	1,339·38					
Maintenance.													
...	358·20	358·20	...	318·56	318·56	...	...	...	...	31,555	31,555	...	...
15,434·45	5,636·10	20,864·22	14,895·91	4,536·24	19,232·35	11,613·19	4,333·30	15,946·18	34,57,601	10,07,212	45,15,903	...	...

(a) Included in (b).
(b) Excess expenditure mainly due to Survey.

APPENDIX II.

Return of Survey and Khanapuri Inspection and of Boundary and Internal Disputes during the year ending 30th September 1909.

Name of area under Settlement.	CADASTRAL SURVEY.						KHANAPURI.					Number of boundary disputes decided.	Number of internal disputes decided.
	Area in square miles surveyed during the year.	PERSONAL PANTAL IN LINEAR MILES. By Assistant Settlement Officers.	By Kanungoes and Head Inspectors.	By Inspectors.	Independent lines in miles.	Total pantal in linear miles.	Total number of plots Khanapuri.	NUMBER OF PLOTS TESTED. By Assistant Settlement Officers.	By Kanungoes and Head Inspectors.	By Inspectors.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
						I. SETTLEMENT OF LAND REVENUE—.							
						Temporarily-settled Estates.							
Burdwan Division.													
Midnapore: petty estates.	0·23	0·05	.....	.....	.....	0·05	463	130	.....	.....	130	.....	.....
Orissa Division.													
Sambalpur	2	·25	.....	4·85	.....	5·10	2,163	20	.....	116	136	.....	.....
						II. OTHER SETTLEMENTS.							
						(a) *Original.*							
Patna Division.													
Patna	1,148	228·76	717·76	2,233·47	1,630·14	4,230·38	1,939,825	14,326	47,939	231,833	294,060	549	55,211
Shahabad ... {	333	65·23	172·36	554·73	438·90	1,231·22	459,757	2,788	9,203	55,859	65,861	152	13,352*
	9	·15	.....	10·82	7·79	18·77	.....	.....	.....	.....	.....	.....	.....
Orissa Division.													
Cuttack: Killa Buhanpur.	17·44	4·46	23·68	48·84	32·26	105·16	24,361	2,886	3,469	2,401	7,638	1	635
Chota Nagpur Division.													
Ranchi	1,511	163	306	1,468	1,069	3,006	784,655	9,736	18,090	89,470	117,296	439	77,675
Manbhum.													
Barabhoom estate	683	69	193	931	504	1,696	453,166	2,815	5,475	40,767	49,057	388	2,244
Singhbhum.													
Dhalbhum estate ...	.....	.....	1	.....	.....	1	223	.....	.....	.....	.....	.....	.....
Moneharpur tenure	14	1	2	21	5	29	4,560	.....	58	87	145	10	.....
									58	870	682	.....	14
						(b) *Revisional.*							
Orissa Division.													
Cuttack	.....	.....	.....	.....	.....	.....	2,549,677	53,467	34,923	142,981	212,371	.....	9,276
Balasore	.....	.....	.....	.....	.....	.....	264,534	3,197	5,473	9,641	18,311	.....	1,079
						(c) *Experimental maintenance.*							
Balasore	.....	.....	.....	.....	.....	.....	1,201,230	1,678	.....	92,334	94,012	.....	4,746

* Cadastral.
† Topographical.

APPENDIX III.

PART A.

Progress in settlement of rents under section 104, Act VIII of 1885, in areas under settlement of Land Revenue during the year ending 30th September 1909.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	Number of tenants for whom rents have been proposed—			Number of villages for which settlement rent-roll has been published in draft—			Objections under section 104E.		
				To the end of the previous year.	During the year.	Total.	To the end of the previous year.	During the year.	Total.	Instituted.		
										To the end of the previous year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
Midnapore Government and temporarily settled estates.	661·23	1,630	196,948	114,630	81,310	195,940	797	703	1,500	16,738	54,934	71,696
Khalsa.												
Estate Lahsa, tauzi No. 676.	·13	3	98	...	98	98	...	3	3	...	...	...
South Bhagalpur...	·72	31	127	127	...	127	23	...	23	31	...	31

Estate or tract under settlement.	Objections under section 104E.			Number of villages and tenants of which during the year a settlement rent-roll has been confirmed—						Comparative rental of villages and tenants in columns 19 and 20.		
	Disposed of			To the end of the previous year.		During the year.		Total.				
	To the end of the previous year.	During the year.	Total.	Villages.	Tenants.	Villages.	Tenants.	Villages.	Tenants.	Former rental.	Settled rental.	Different per cent. + or −.
	14	15	16	17	18	19	20	21	22	23	24	25
										Rs. a.	Rs. a.	
Midnapore Government and temporarily settled estates.	14,706	50,366	64,972	462	46,611	167	23,253	629	70,064	70,906 0	82,125 0	+15·76
Khalsa.												
Estate Lahsa, tauzi No. 676.	...	...	...	...	...	3	98	3	98	264 8	345 3	+31
South Bhagalpur...	31	...	31	3	35	23	93	26	127	297 9	(a) 297 0	...

(a) Existing rent settled as'air.

APPENDIX III.

PART B.

Progress in settlement of rents in areas not under settlement of Land Revenue during the year ending 30th September 1909.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	PROCEEDINGS UNDER SECTION 109(c), BENGAL TENANCY ACT.				NUMBER OF SECTION 105 CASES WHICH HAVE BEEN INSTITUTED—			
				Number of tenants.	Rent according to landlord.	Rent legally payable.	Rent settled by compromise.	To the end of the previous year.		During the year.	
								Number.	Number of tenants.	Number.	Number of tenants.
1	2	3	4	5	6	7	8	9	10	11	12
Midnapore.					Rs.	Rs.	Rs.				*I.—Original*
Nayabasan and Kobini.	136·26	671	24,667	...	...	...	...	1,736	19,706	1	15
Dipakiarchand, Jamirpal and other petty estates.	71·33	167	13,133	...	...	...	...	367	8,016	(a) 37	37
Khulna: Dihi Bhadra.	71·33	73	26,464	...	...	...	...	...	...	720	1,386
Murshidabad—Fatehsingh.	90·29	127	46,304	...	...	...	...	658	9,610	...	...
Patna (b)	811	880	206,631	4,314	59,085	...	53,767	...	...	...	...
South Monghyr (c)	3,978	3,333	251,937	54,950	3,70,649	...	4,46,264	15	197	822	17,694
South Bhagalpur ...	1,622	2,268	150,005	...	...	...	...	1,352	17,810	216	3,213
Orissa.											
(Puri) Parikud ...	140	126	14,121	...	...	...	...	(d) 7,570	7,570	760	760
											II.—Rent
Balasore ...	1,839·28	3,126	287,246	...	...	...	...	6,559	5,986	6,560	6,763

Estate or tract under settlement.	NUMBER OF SECTION 105 CASES WHICH HAVE BEEN INSTITUTED—		NUMBER OF CASES WHICH HAVE BEEN DECIDED OF—						OF TENANTS IN COLUMN 18.		
	Total.		To the end of the previous year.		During the year.		Total.		Former rental.	New rental.	Difference, per cent + or −.
	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.			
	13	14	15	16	17	18	19	20	21	22	23
Midnapore.	*Settlements.*								Rs.	Rs.	
Nayabasan and Kobini.	1,737	19,811	1,190	18,737	537	8,076	1,727	19,813	12,397	13,000	...
Dipakiarchand, Jamirpal and other petty estates.	324	5,067	288	4,929	37	37	373	5,176	100	127	...
Khulna: Dihi Bhadra.	730	1,330	...	...	717	1,319	717	1,319	3,063	3,439	+5
Murshidabad—Fatehsingh.	653	9,610	546	7,961	107	1,649	653	9,610	...	...	...
Patna ...	...	...	...	...	...	...	...	...	...	...	...
South Monghyr ...	835	11,871	...	...	840	9,710	646	9,710	1,46,007	1,62,397	+11·5
South Bhagalpur ...	1,502	20,735	1,354	15,654	156	2,548	1,479	18,533	46,880	52,836	+12·9
Orissa.											
(Puri) Parikud ...	8,330	8,330	...	...	3,461	3,461	3,461	3,461	11,110	16,406	+ 49
	(consol.										
Balasore ...	12,119	12,869	5,372	5,986	2,729	2,964	7,377	7,755	7,953	13,497	+77

(a) Dighadari.
(b) Attestation area of 1908-09.
(c) Columns 5, 6 and 8 including previous year's figures, the work having overlapped.
(d) Excludes 1,146 commutation cases shown last year.
(e) Exclusive of Rs. 383 for *kabili lagan* (liable to assessment) tenants.

APPENDIX III.

PART C.

Progress in disposal of Case-work other than settlement of fair rents during the year ending 30th September 1909.

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
I—LAND REVENUE SETTLEMENTS.							
Midnapore.			*(a) Government Estates and Temporarily-settled Estates.*				
Boundary disputes ...	223	...	223	219	4	223	...
Section 103A ...	27,812	10	27,822	27,788	34	27,822	...
Do. 40 ...	1,977	2,024	4,001	918	395	1,313	2,688
II—OTHER SETTLEMENTS.							
Midnapore.			*(a) Original.*				
Boundary disputes ...	214	...	214	213	1	214	...
Section 103A ...	3,578	589	4,167	3,322	845	4,167	...
Do. 106 ...	1,158	24	1,182	1,033	126	1,159	23
Murshidabad.							
Fatehsingh estate—							
Do. 106 ...	310	...	310	293	17	310	...
Khulna.							
Dihi Bhadra estate.							
Section 106(a) ..	..	258	258	....	194	194	64
Do. 108A ...	...	320	320	...	52	52	268
Patna District.							
Boundary disputes ...	460	530	990	449	540	989	1
Section 40 ...	...	2,545	2,545	...	258	258	2,287
Do. 103A ...	...	22,855	22,855	...	22,854	22,854	1
Shahabad District.							
Boundary disputes ...	...	133	133	...	133	133	...
South Monghyr.							
Boundary disputes ...	637	4	641	631	10	641	...
Section 40 ...	2,697	3,185	5,882	1,050	1,702	2,752	3,130
Do. 103A ...	7,311	13,845	21,156	7,308	13,848	21,156	...
Do. 106 ...	...	291	291	...	161	161	130
South Bhagalpur.							
Section 40 ...	2,548	1,695	4,243	2,430	603	3,033	1,210
Do. 103A ...	10,717	73	10,790	10,717	73	10,790	...
Do. 106 ...	536	145	681	524	98	622	59
Sonthal Parganas.							
Zamindari estates, 3rd programme.							
Section 24, Regulation III of 1872 ...	8,602	9,757	18,359	5,700	10,487	16,187	2,172

(a) Column 7—161 were transferred to Civil Courts.

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
Cuttack.							
Killa Bishanpur.							
Boundary disputes ...	...	4	(a)4	...	1	1	...
Puri.							
Parikud.							
Section 106 ...	58	71	129	15	114	129	...
Do. 40 ...	(b)1,146	361	1,507	...	1,507	1,507	...
Ranchi.							
Boundary disputes ...	2,257	449	2,706	2,257	430	2,687	19
Section 103A, B. T. A. Do. 83(1) C. N. T. A.	17,192	9,954	27,146	17,192	9,954	27,146	...
Section 9A C. N. T. A Do. 111(6) C. N. T. A.	1,749	812	2,561	1,749	812	2,561	...
Section 9A(3) C N. C. A. and section 111(3) C. N. T. A.	44	13	57	31	13	44	13
Section 87, C. N. T. A.	...	52	52	...	...	...	52
Do. 61, C. N. T. A.	...	182	182	...	182	182	...
Do. 94, C. N. T. A.	...	13	13	...	...	...	13
Manbhum.							
Pargana Barabhum.							
Boundary disputes ...	...	388	388	...	388	388	...
Singhbhum.							
Dhalbhum estate.							
Boundary disputes ...	499	...	499	489	10	499	...
Section 103A, B. T. A. and section 83(1) C. N. T. A.	3,290	3,329	6,619	3,290	3,329	6,619	...
Section 9A C. N. C. A. and section 111(6) C. N. T. A.	104	126	230	104	126	230	...
Section 87 C. N. T. A. and section 106 B. T. A.	...	77	77	...	...	...	77
Section 111(3) C. N. T. A.	...	3	3	...	...	...	3
Section 61 C. N. T. A., and section 40 B. T. A.	...	1,920	1,920	...	...	...	1,920
Section 130 C. N. T. A.	...	202	202	...	...	...	202
Orissa.			(b) *Revisional.*				
Cuttack.							
Boundary disputes ...	...	14	14	...	12	12	2
Section 103A ...	...	29,488	29,488	...	27,806	27,806	1,682
Section 40 ...	...	99	99	...	...	...	99
Balasore.							
Boundary disputes ...	6	...	6	6	...	6	...
Section 103A ...	20,593	3,650	24,243	20,593	3,647	24,240	3
Do. 40 ...	871	521	1,392	29	...	29	1,363
Do. 106 ...	329	1,009	1,338	167	170	337	1,001
Do. 108 ...	...	5	5	...	5	5	...
Do. 108A ...	...	769	769	...	443	443	326
			(c) *Experimental maintenance.*				
Section 103A objections	...	879	879	...	...	...	879

(a) Three cases struck off.
(b) Included in section 106 cases last year.

APPENDIX III.

PART D.

Progress in settlement of Land Revenue during the year ending 30th September 1909.

Name of estate or tract under settlement.	Total area.	Total existing assess.	Total new assess.	New Land Revenue settled during the year.				Total Cost and cost rate.		
				Area.	Existing Land Revenue.	New Land Revenue.	Percentage of difference, + or —	Total costs incurred on area in column 3	Cost rate per square mile according to sanctioned estimate.	Actual cost rate per square mile, column 9÷3.
	2	3	4	5	6	7	8	9	10	11
Khalsa.										
Estate Lahardaganj No. 976.	Sq. M. '13	Rs. 204	Rs. 338	Sq. M. '13	Rs. 204	Rs. 249	+21	Rs. 79	Rs. 616	Rs. 616

PART E.

Results of Appeals during the year ending 30th September 1909.

Name of estate or tract under settlement.	Nature of case.	Pending from previous year.	Instituted during the year.	Disposed of during the year.	Balance pending.	Results of appeals (column 6).			Cases returned for re-trial.
						Decisions.			
						Upheld.	Modified.	Reversed.	
1	2	3	4	5	6	7	8	9	10
		I.—Land Revenue Settlements.							
		(a) *Government Estates and Temporarily-settled Estates.*							
Midnapore.									
Jalamutha, Majsamutha and other estates.	1903.	9	412	69	352	...	...	...	...
Ditto ditto ...	Section 40	...	152	10	142	...	...	...	...
		II.—Other Settlements.							
		(a) *Original.*							
Midnapore.									
Dipaklawchand	Section 105	1	...	...	...	...	...	...	1
Khalsa.									
Dhi-Bhadra	Section 105	...	976	258	118	255	...	...	3
	Do. 106	...	2	...	2	...	...	...	...
Patna district	Boundary disputes ...	...	169	169	1	133	32	4	0
	Section 40 (B. T. A.)	...	178	...	178	...	...	...	...
Shahabad district ...	Boundary disputes ...	...	55	55	...	46	7	...	0
South Monghyr	Boundary disputes ...	11	3	5	7	5	1	...	...
	Section 40 (B. T. A.)	26	631	604	53	373	134	...	127
South Bhagalpur	Section 105 (B. T. A.)	123	257	250	130	170	69	23	5
	Do. 106 (B. T. A.)	12	13	20	5	20	2	7	...
	Do. 40 (B. T. A.)	50	573	623	...	426	147	3	17
	Do. 108 (B. T. A.)	...	19	19	...	...	...	19	...
Purnea district	Do. 40 (B. T. A.)	14	...	14	...	14	...	...	...
	Do. 103 (B. T. A.)	9	...	9	...	4	4	...	1
	Do. 106 (B. T. A.)	39	...	39	...	3	...	36	...
Southal Parganas.									
Zamindari estates, 3rd programme.	Section 54 of Regulation III of 1872.	186	681	606	261	483	36	68	19
	Revision	69	256	213	102	203	15	15	18
Purii.									
Parikud	Section 105	...	41	2	39	2	...	...	...
	Do. 106	...	1	1	...	...	...	...	1
	Do. 40	...	1	1	...	...	...	...	1
Chota Nagpur.									
Ranchi	Boundary disputes ...	14	93	97	10	79	10	8	...
	Section 106 (C. N. L. T. A.).	5	...	5	...	5	...	...	...
	Section 9A(3) (C. N. C. A.).	2	...	2	...	2	...	...	...
Manbhum.									
Pargana Barabhum ...	Boundary disputes ...	...	66	66	...	41	6	9	25
Singbhum.									
Dhalbhum estate ...	Boundary disputes ...	1	...	1	...	...	1	...	...
		(b) *Revisional.*							
Balasore	Section 103	1	5	1	5	...	...	1	...
	Boundary disputes ...	1	...	1	...	1	...	...	...
	Section 106	...	4	3	2	1	...	1	...
	Do. 103A	...	2	...	2	...	...	...	...

APPENDIX IV.

Statement showing the nature and number of holdings recorded in each settlement during the year ending 30th September 1909.

Name of estate or tract under settlement.	Number of khatian recorded in the name of—												
	Proprietors.		Tenure-holders' cultivating possession.	Raiyats at fixed rates or fixed rents.	Settled raiyats.	Occupancy raiyats.	Non-occupancy raiyats.	Rent-free holders.		Unoccupied.	Government.	Total.	Under-raiyats.
	As private lands.	Not as private lands.						Service tenure.	Other.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Patna district ...	2	10,150	3,446	1,405	2,04,117	199	681	4,637	6,617	13,748	507	2,43,512	139*
South Monghyr ...	6	7,001	2,413	3,418	1,56,220	327	1,176	4,555	3,729	9,194	726	1,88,446	119
South Bhagalpur ...	...	...	16	...	231	1	19	7	19	29	3	306	192
Puri Parikud ...	...	73	92	...	11,916	7	97	368	1,779	885	95	15,986	258
(b) *Revisional.*													
Cuttack	3,099	3,540	18,611	54,470	2,40,422	2,115	3,136	3,941	58,623	7,415	1,719	3,94,554	62,279†
Balasore	174	1,628	3,971	5,544	49,308	294	1,480	1,288	6,451	1,486	33	70,334	3,339

* With occupancy right : 3,230 without occupancyright.
† Column 14—With occupancy right : 4,894 without occupancy right.
‡ With occupancy right : 66 without occupancy right.

APPENDIX V.

Showing the progress made in Recovery of Costs during the year ending 30th September 1909.

Division.	District.	Estate or tract under settlement.	Demand.			Collections.						Grand Total collected.	Balance.		
			Landlords' share.	Occupiers' share.	Total.	Landlords' share.			Occupiers' share.				Landlords' share.	Occupiers' share.	Total.
						Voluntary.	By certificate.	Total.	Voluntary.	By certificate.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Presidency* ..	Khulna ...	Dihi Bhadr. ...	37,725	15,777	53,502	36,796	3	36,799	14,743	4	14,750	51,549	1,929	1,027	2,956
Bhagalpur ...	Bhagalpur	South Bhagalpur	2,56,687	1,56,921	4,13,608	20,736	...	20,736	...	...	...	20,736	2,22,071	1,90,921	4,12,992
Ditto ...	Purnea ...	Purnea District...	9,921	420	9,941	3,646	6,275	9,921	626	126	620	9,941	...	...	...
		Zamindari estates.													
Ditto ...	Sonthal Parganas	1st Programme ...	107	.....	107	...	84	84	...	...	...	84	23	...	23
		2nd Programme ...	25,788	.....	25,788	15	15,290	15,305	...	...	...	15,305	10,483	...	10,483
		3rd Programme ...	1,73,709	.....	1,73,709	1,00,078	23,967	1,23,045	...	..	..	1,23,045	50,664	...	50,664
Orissa ...	Puri ...	Parikud	4,548	6,316	10,764	1,438	...	1,438	6,902	...	6,902	8,035	3,015	...	3,015
Chota Nagpur	Ranchi ...	Ranchi District ...	1,92,854	1,40,922	3,33,776	1,74,411	1,240	1,75,651	11,46,510	53	1,46,563	3,18,213	17,565	798	17,863

*Column 13—set off against deposits ... ... Rs. 13,918
Realised in cash 36,634
50,549

† Excess collection is due to unit system of computation.

APPENDIX VI.

PART A.

Statement of some sales during the past ten years of Proprietary Rights collected during attestation in the year ending 30th September 1909.

Name of estate or tract under settlement.	Area under attestation during the year.	Area of villages in which statistics were collected.	Number of estates in the selected villages.	SALES OF ESTATES OR PORTIONS OF ESTATES.			WHETHER THE PURCHASER BELONGS TO THE CLASS OF—			
				Number of sales.	Land revenue transferred.	Price paid.	Landlord.	Raiyat.	Mahajan.	Lawyer.
1	2	3	4	5	6	7	8	9	10	11
	Sq. M.	Sq. M.		*Original Settlements.*						
Patna District ...	811	811	4,898	214	7,141	5,73,365	119	74	9	12
South Monghyr ...	863	863	3,292	150	4,390	5,10,168	115	14	16	5
				Revisional Settlements.						
Cuttack	630·75	406·70	609	253	14,176	2,12,967	173	66	14	.....
Balasore	206·21	39·16	45	30	7,361	1,61,473	21	3	17	.....

APPENDIX VI.

PART B.

Statement of mortgages during the past ten years collected during attestation in the year ending 30th September 1909.

Name of estate or tract under settlement.	Area under attestation during the year in acres.	Number of holdings attested.	AREA, IN ACRES, HELD BY MORTGAGEES—					PROFESSION OF MORTGAGEE.							
			From proprietors.	From tenure-holders and under-tenure-holders.	From raiyats at fixed rates.	From settled raiyats.	From occupancy raiyats.	From non-occupancy raiyats.	Landlord.		Raiyat.		Mahajan.		Lawyer.	
									Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
						Original Settlements.										
Patna District ...	519,040	245,518	1,976	274	144	2,201	5	3	1,163	1,445	10,683	8,740	523	1,113	159	122
South Monghyr ...	353,329	160,378	1,336	268	261	944	6	...	715	1,728	10,205	8,939	276	576	7	1
						Revisional Settlements.										
Cuttack	435,200	447,143	53·70	40·68	367·25	1,603·75	8·03	2·34	137	187·92	1,186	1,032·96	112	851·27	6	27·20
Balasore	132,338	77,733	13·77	8·04	52·23	258·92	...	2·73	40	32·27	183	204·92	144	242·23	...	...
						Experimental Maintenance.										
Balasore ...	220,206	43,570	3·21	6·23	29·26	54·28	...	0·25	14	12·71	433	446·75	98	122·26	...	...

APPENDIX VI.

PART C.

Statement of transfers of Occupancy Rights during the past ten years collected during attestation in the year ending 30th September 1909.

Name of district and settlement.	Area under attestation during the year in square miles.	Number of raiyati holdings attested.	Area of raiyati holdings attested in acres.	Number and area of holdings transferred.				Profession of transferee.								Number of raiyats who still occupy their lands.		Price per acre of area transferred.	
				Entire holdings.		Part holdings.		Landlord.		Raiyat.		Mahajan.		Lawyer.					
				Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	On cash rents.	On produce rents.	Whole holding.	Part of holding.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
								Original Settlements.										Rs.	Rs.
Patna District	811	2,19,900	2,57,097	906	1,483	2,254	1,917	291	369	2,058	2,676	135	280	33	44	...	...	104	100
South Monghyr	363	1,16,782	2,30,307	790	1,768	1,035	1,765	109	326	2,031	2,554	91	134	4	4	...	2	111	99
								Revisional Settlements.										Rs.	Rs.
Cuttack ...	650·73	2,96,674	2,57,548	10,006	6,825	25,652	14,332	3,041	1,963	25,493	13,351	7,988	5,647	366	195	...	...	74	77
Balasore ...	209·21	88,961	79,701	1,851	2,613	3,697	4,042	717	1,331	3,401	3,733	1,415	1,336	11	15	...	...	32	46
								Experimental maintenance.										Rs.	Rs.
Balasore ...	358·98	*...	*...	605	459·42	1,196	993·79	58	45·48	1,863	1,163·30	251	332·26	...	...	...	...	68	43

*Not available.

APPENDIX VII.

(*See* Chapter IV of the Report.)

Showing Mutations in Tenants' Rights for the year ending 30th September 1909.

Government Estates.

Division and District.	Estate.	Total area of the estate in acres.	Total number of tenancies.	Number of mutations registered.										Percentage of mutations to total number of tenancies, col. 9 (a) + (b) on col. 4.	Total area in acres transferred.	Average price per acre of land sold.
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*			
Burdwan Division.																
Midnapore*	Kaminachak ...	312	279	3	3	...	...	...	...	...	...	3	3	2·3	6	445
Presidency Division.																
Khulna	3 estates	4,290	137	4	2	8	9	...	1	3	3	15	15	10·9	337	15
Patna Division.																
Patna	31 estates	41,535	7,516	92	198	187	3	6	18	1	6	287	124	5·6	1,566	25 to 600
Gaya	6 „ „ ...	47,582	3,817	19	14	64	3	4	7	2	...	89	24	3·2	450	20
Shahabad	18 „	11,726	1,440	10	5	50	3	...	...	...	...	60	7	4·65	225	41
Tirhut Division.																
Saran	Mudha	360	336	2	1	...	13	...	2	...	...	2	16	7·2	3	245
Do.	Makdhumganj ...	186	95	1	3	...	...	...	...	...	...	1	3	4·4	5	229
Darbhanga†	Bakhtiarpur ...	1,110	523	2	...	9	...	...	...	...	...	11	...	2·1	69	...
Ditto	Bhagwatipur ...	1,111	467	2	3	3	1	...	...	...	...	4	6	2·1	6	30
Ditto	Andaman ...															
Bhagalpur Division.																
Bhagalpur‡	4 estates	20,966	2,350	13	...	43	...	...	...	...	...	56	...	2·3	80	23 to 75
Monghyr	Diara and other estates.	54,786	9,600	61	122	58	10	5	4	...	1	124	138	2·7	730	25 to 300
Purnea	2 Estates	7,837	802	3	...	4	...	...	...	11	...	20	...	2·5	109	5·8 to 10
Sonthal Parganas§ ...	Sahebganj Tauzi No. 895.	703	2,229	3	2	1	...	...	...	...	...	9	3	·49	·84	4,312
Ditto	3 other estates ...	1,065	672	4	2	23	...	...	...	...	...	26	2	4·2	3·02	27 to 670
Darjeeling	Terai Jotes	124,876	645	7	90	8	124	2	9	1	7	18	230	22·34	8,865	34
Ditto	West Tessta Khas Mahal	15,076	1,388	13	...	42	...	...	...	23	...	77	...	5·54	633	30
Ditto	Kalimpong estate...	114,216	5,535	139	54	146	11	5	11	13	11	290	87	6·61	2,818	40 to 100
Orissa Division.																
Cuttack	Banki...	75,030	33,926	355	1,329	1,028	2,273	151	923	6	18	2,140	4,544	19·70	7,488	85
Do.	Town Khas Mahal...	726	1,911	66	11	67	14	...	...	1	3	134	28	6·28	19	2,000
Balasore‖	Chandbali	178	139	3	1	4	...	...	...	...	...	7	1	5·15	2·9	250
Angul	Angul	570,327	31,283	...	...	1,764	1,052	109	919	...	...	1,871	1,971	12	17,900	—
Khurda	Kodhar	6,377	787	...	1	4	...	...	...	...	...	4	1	·6	45	45
Do.	Balukhand ...	575	299	1	1	...	...	...	...	...	...	1	1	·66	·72	1,000
Sambalpur**	Naikpara	130,910	5,973	46	72	150	6	4	32	7	1	207	114	5·37	2,286	46
Ditto	Thikadari	686,333	37,631	...	...	1,138	57	39	344	61	38	1,409	764	5·72	36,014	62
Ditto	Baiyatwari	6,949	214	1	...	5	...	...	...	...	...	6	...	2·80	55	...
Ditto	Zamindari	966,943	23,896	548	248	296	84	10	198	8	7	729	610	5	39,197	62
Chota Nagpur Division.																
Palamau	Palamau and Balidehri.	272,637	18,474	55	26	1,313	399	...	115	3	8	1,350	553	11·24	16,324	44
Singhbhum	Kodarma	38,460	2,674	1	...	6	11	...	...	...	...	37	13	·6	175	30
Do.	Hata	7,273	3,123	1	...	5	...	...	...	...	...	6	...	·2	14	...
	Total ...	3,343,918	195,510	1,414	2,339	7,141	4,619	338	2,407	181	103	9,035	9,067	9·3	196,751·78	9·8 to 4,281

* Mutamuths, etc., have been omitted as still under settlement.
† Mutations of part pots are not allowed.
‡ Several mutations are still under enquiry.
§ The Dumka estate has been omitted as the villages are all *pradhani* and there is no maintenance of raiyati records.
‖ Nayabandobast estate is omitted as it is mostly under settlement.
** The Khuriya estate has been omitted as no estate khasra was done during the year.
†† The *pattawari* system obtains in this district.

APPENDIX VII—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total area of the estate in acres.	Total number of Remarks.	NUMBER OF MUTATIONS REGISTERED.										Percentage of mutations to total number of Remarks, col. 9 (a)+(b) on col. 4.	Total area in acres transferred.	Average price per acre of land sold.
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	b	a	b	a	b	a	b	a	b			
Burdwan Division.																
Midnapore *	Nayagram	13,468	5,958	76	128	18	3	2	7	2	1	98	134	3·37	290·90	60
Patna Division.																
Gaya	Deo Ward's and Deo Raj's Estates.	61,704	6,219	25	...	971	...	46	...	...	...	342	...	5·71	891	25
Tirhut Division.																
Saran	Hathwa	459,500	93,273	626	403	3,165	29	130	433	13	2	4,096	973	5·3	1,459	62
Do.	Chainteria	5,518	2,411	2	6	...	...	...	...	...	...	2	6	·61	17	100
Do.	M. Hussain	1,353	240	12	1	...	...	...	...	...	...	12	1	5·4	9	300
Do.	Khajwa	12,503	4,464	1	...	...	...	...	4	...	2	1·	6	·13	1·48	100
Muzaffarpur and Champaran.	Bettiah	1,376,638	223,247	235	1,196	766	91	5	161	7	1	1,113	1,469	1·14	3,614	80
Muzaffarpur	Rahtha	20,322	5,859	58	31	20	6	1	27	...	...	79	114	3·34	145	75
Ditto	Tajakahi	5,617	4,237	62	3	2	...	...	...	...	...	64	3	1·7	23	100
Ditto	Shahar	19,857	10,209	46	167	...	...	...	5	...	...	47	168	1·2	406	200
Ditto	Semmal	Not known	6,272	1	6	...	...	...	...	...	...	1	4	·06	2	300
Patna Darbhanga, Muzaffarpur and Monghyr.	Nathan	60,972	22,442	79	192	130	...	...	...	...	...	209	191	1·78	782	70
Bhagalpur Division.																
Bhagalpur	Lugma	7,889	1,365	7	28	6	...	6	...	...	...	25	23	2·1	151	25
Ditto	Shahpur	7,089	1,653	...	2	...	...	...	...	...	...	...	5	·29	11	25
Monghyr	Ratan	5,190	4,180	21	6	3	...	...	...	...	...	24	6	·72	74	30
Ditto	Bahadoorpur ...	32,990	9,014	106	23	135	9	4	...	...	...	323	37	2·20	1,145	70
Ditto	Shahzarpur ...	6,387	3,469	13	10	24	2	...	1	...	...	43	13	1·57	148	30
†Santhal Pargunas ...	Pakaur	18,911	11,393	120	128	1	...	...	...	2	...	136	128	2·35	130	30
Ditto	Kalnal	68,539	4,930	31	...	2	...	...	...	1	...	34	...	·61	20	671
Ditto	Pathrol	60,999	3,315	2	...	6	...	...	...	...	...	15	...	·05	574	200
Ditto	Pirpal	32,548	2,216	...	...	...	...	...	...	...	...	...	...	...	...	...
Ditto	Gastara	10,672	159	...	...	6	...	...	...	...	...	6	...	2·1	30	...
Orissa Division.																
Cuttack	Darpan	69,737	53,111	501	339	...	...	...	...	...	...	501	339	1·78	1,778	43
Puri	Dejang Mustabul ...	14,610	8,700	4	99	984	...	...	...	...	...	988	99	13	1,333	120
Do.	Sarbarahkari	37,801	183	1	10	56	...	...	3	...	...	57	13	41	...	...
Do.	Sarbarahkari Tenures Garh Ghorsalah and Kalupara.	8,461	3,844	3	13	479	...	...	1	...	...	483	13	12·9	573	153
Chota Nagpur Division.																
Ranchi	Barhadih	17,247	455	...	...	2	...	...	...	...	...	2	...	·43	...	...
Do.	Jamadag	2,330	246	...	...	22	...	...	...	...	...	22	...	8·91	...	...
Do.	Jamangiri	1,681	106	...	...	6	...	...	...	...	...	6	...	5·66	...	...
Do.	Joria	17,681	1,578	...	...	72	...	...	...	...	...	72	...	5·43	...	...
Do.	Kasaberbahala ...	2,515	200	...	...	6	...	...	...	...	...	6	...	3·00	...	...
Do.	Mardhan	12,891	467	...	...	5	...	...	...	...	...	5	...	1·05	...	...
Do.	Ourpahar	7,573	325	...	...	45	...	...	...	...	...	45	...	13·81	...	...
Do.	Rora	1,086	619	...	...	23	...	...	...	...	...	23	...	4·04	...	...
Do.	Sarjamdih	7,738	674	...	...	47	...	...	...	...	...	47	...	6·97	...	...
Do.	Sirk	1,443	710	...	...	3	...	...	...	...	...	3	...	·28	...	...
Do.	Sonahatu	9,724	630	...	...	24	...	...	...	...	...	24	...	3·82	...	...
Do.	Tamar	146,884	976	...	...	15	...	...	...	...	...	15	...	1·53	...	...
Do.	Taral	55,946	408	...	...	38	...	...	...	...	...	38	...	9·26	...	...
Do.	Biru	220,026	5,486	1	...	60	...	...	...	...	...	7	...	·28	...	...
Do.	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do.	Total † (E. N. T.) ...	19,339	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	3,191,497	473,416	2,225	3,367	6,408	145	353	673	36	6	8,924	4,191	3·76	17,925·35	...

* Jhargram is omitted as being under settlement.
† Headman system obtains.

APPENDIX VIII.

[See Chapter IV of the Report.]

Showing Re-settlement of Vacant Tenancies during the year ending 30th September 1909.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RE-SETTLED DURING THE YEAR.		VACANT TENANCIES RE-SETTLED DURING THE YEAR.	
		Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6
Burdwan Division.					
Midnapore	Harinampore ...	3	3·72	3	3·72
Patna Division.					
Patna	Government Estates	17	51·46	14	51·23
Gaya	Ditto ...	75	261	53	254
Shahabad	Ditto ...	3	·57	1	·13
Tirhut Division.					
Darbhanga	Bukhtiarpur ...	2	8·18	2	8·18
	Bhagawatipur ...	...	...	2	1·32
	Andaman ...				
Bhagalpur Division.					
Bhagalpur	Bhagalpur Diara Tauzi No. 346.	3	12·33	3	12·33
	Bhagalpur Sadar khas mahal, Tauzi No. 848.	1	24·11	1	24·11
Monghyr	Town Khas Mahals	7	·25	2	8
	Diara Estates ...	1	1·10	1	1·10
Purnea	Belwa Harinkhori	11	49·96	11	49·96
Sonthal Parganas ...	Pakur Damin ...	2	·33	2	·33
	Amanat Sarkar Nadia.	3	14·90	3	14·90
	Amanat Sarkar Sarfarjganj.	1	0·95	1	0·95
	Gird line Fudkipur	4	2·79	4	2·79
	Railway "B." class lands No. 41.	1	1·25	1	1·25
	Sahebganj, Tauzi No. 599.	1	4	1	4
Orissa.					
Cuttack	Banki ...	...	...	187	74
Balasore	Nayanand Birso ...	1	0·97	...	...
Angul	Angul ...	709	1,535·35	51	154·32
Puri	Khurda ...	9	24·34	...	...
	Baluk band ...	11	4·50	2	1·89
Sambalpur	Malguzari ...	10	93·58	1	6·04
	Thikadari ...	6	7·74	6	7·74
	Zamindari ...	54	464·76	6	57·85
Chota Nagpur Division.					
Palamau	Palamau and Baldeohiri Estates.	701	2,310·31	642	2,182·62
Hazaribagh ...	Kodarma ...	7	37·66	7	37·66
	Total ...	1,643	4,920·23	1,007	2,960·42

APPENDIX VIII—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RE-SETTLED DURING THE YEAR.		VACANT TENANCIES RE-SETTLED DURING THE YEAR.	
		Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6
Burdwan Division.					
Midnapore	Pachetgarh ...	38	45	6	4
Do.	Nayagram ..	20	48·29	9	9·43
Patna Division.					
Gaya	Deo Ward's and Deo Rani's Estates.	15	89·40	10	60·15
Tirhut Division.					
Saran	Hathwa ...	1,063	2,157·76	1,003	1,690·20
Do.	Chautaria ...	8	36·75	...	...
Do.	M. Hussain ...	1	6·35	...	...
Do.	Khojwa ...	10	12·8	1	1·40
Champaran and Muzaffer-pur.	Bettiah ...	1,700	3,705·68	2,398	5,289·28
Muzaffarpur ...	Mahtha ...	9	5·44	2	2·82
Ditto	Tamkohi ...	85	265·19	43	87·28
Ditto	Sheohar ...	91	194·35	83	160·75
Darbhanga, Muzafferpur, Patna and Monghyr.	Narhan ...	283	649·46	169	479·28
Bhagalpur Division.					
Bhagalpur	Lugma ...	5	5	5	5
Monghyr	Ratan ...	119	236·07	5	33·10
Do.	Bahadurpur ...	998	4,322·5	166	429·91
Do.	Shakerpura ...	105	587·15	8	32·86
Sonthal Pargapas ...	Pathrole ...	...	...	2	·04
Do.	Pakour ...	258	177	18	14
Orissa Division.					
Puri	Delang (Huzabud Sarbarahakari).	4	1·35	1	·40
Chota Nagpur Division.					
Ranchi	Bajpur ...	2	2·56	2	2·56
Do.	Jeria	2	2·79	2	2·79
Do.	Tarni ...	1	1·28	1	1·28
Do.	Oroydara ...	1	2·22	1	2·22
Do.	Toto ...	...	...	12	200·76
Do.	Zoro ...	...	...	3	13
Do.	Sahijana ...	...	...	4	45·5
Do.	Kulmunda ...	...	...	3	7·56
Do.	Bira ..	2	4·13	...	...
Do.	Armai ...	6	11·25	...	...
Do.	Porha ...	2	11·24	...	...
Do.	Taisar ...	36	132·68	...	...
	Total ...	4,815	12,713·27	3,897	8,575·57

APPENDIX IX.

[See Chapter IV of the Report.]

Showing New Settlements of Waste Lands during the year ending 30th September 1909.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of new tenancies on new lands settled.	Total area of such tenancies.	REMARKS. (Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Patna Division.				
Patna ...	Government Estates	432	1,018·51	
Gaya ...	Ditto ...	32	30·46	
Shahabad ..	Ditto ...	37	69	
Tirhut Division.				
Darbhanga ..	Bukhtiarpur ...	7	·72	
Bhagalpur Division.				
Bhagalpur ...	Bhagalpur Diara Khas Mahal, Tauzi No. 346.	1	4·72	
	Khas Mehal Madhepura, Tauzi No. 2781.	9	5·56	
	Supaul Khas Mahal, Tauzi No. 3854.	20	26·70	
Monghyr ...	Town Khas Mahals ...	4	·50	
	Diaras in Sadar Subdivision.	544	873·00	
	Other estates in Sadar Subdivision.	41	20·00	
Purnea ...	Behra Harinkhori ...	117	999·51	
Santhal Parganas	Government Estates	28	18·09	
Darjeeling ...	West Teesta Khas Mahal.	7	41·41	
	Kalimpong ...	245	1,083·60	
Orissa Division.				
Cuttack ...	Banki	22	12·58	Settlement rate.
	Town Khas Mahal ...	...	·0072	Not settled with new tenants but included in the old lease of settled tenants.
Balasore ...	Chandbali ...	2	·81	Rent fixed according to settlement rate.
Angul ...	Angul	17	18·03	Ditto ditto.
Puri ...	Khurda ...	23	64·72	Ditto ditto.
Do. ...	Kedhar ...	7	14·25	Ditto ditto.
Do. ...	Balukhand ...	3	2·16	In two cases rents were fixed at Rs. 75 and Rs. 150 per acre.
Sambalpur ...	Malguzari ...	120	130·93	Rupees 5-12, rent fixed otherwise.
	Thiksdari ...	431	372·78	Rupees 5-6, rent fixed otherwise.
	Raiyatwari ...	2	31·37	
	Zamindari ...	1,262	1,152·62	Rupees 42-14, rent fixed otherwise.
Chota Nagpur Division.				
Palamau ...	Government Estates	159	276·79	
Hazaribagh, ...	Kodarma	9	33·19	
Do. ...	Hata	4	13·51	
	Total ...	3,584	6,315·43	

APPENDIX IX—*concluded.*

Wards' Estates.

Division and District.	Estate.	Total number of new tenancies on new lands settled.	Total area of such tenancies.	Remarks. (Explanatory of the mod of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Burdwan Division.				
Midnapore ...	Pachetgarh ...	27	13	
Do. ...	Nayagram ..	13	21·25	
Patna Division.				
Gaya ...	Deo Raja and Deo Rani's Estate.	22	36·5	
Tirhut Division.				
Saran ...	Hathwa ...	565	510·34	
Champaran and Muzaffarpur.	Bettiah ...	1,289	1,500·18	
Muzaffarpur ...	Mahatha ...	2	·80	
Do. ...	Shechar ...	21	26·54	
Darbhanga ...	Narhan ...	97	140·55	
Bhagalpur Division.				
Bhagalpur ...	Legma ...	2	2·18	
Do. ...	Shahpur ...	4	3	
Monghyr ...	Ratan ...	11	171·16	
Do. ...	Bahadurpur ...	257	1,069·30	
Do. ...	Shakerpura ...	21	75·88	
Sonthal Parganas	Pakour ...	20	17	
Do. ...	Rohini ...	13	13·87	
Do. ...	Pathrole ...	14	12·32	
Orissa Division.				
Puri ...	Delang-Hastabad ...	24	16·41	Rates enhanced as compared with last year.
Do. ...	Do. Sarbarahkari tenures.	7	5·10	
Chota Nagpur Division.				
Ranchi ...	Sonahatu ...	2	15·04	
Do. ...	Jeria ...	2	2·91	
Do. ...	Loahatu ...	1	2·32	
Do. ...	Rora ...	1	4·50	
Do. ...	Siri ...	2	2·25	
Do. ...	Maradhan ...	1	·35	
Do. ...	Oreydara ...	1	·97	
Do. ...	Bajpur ...	15	13·98	
Do. ...	Guru ...	5	3·75	
	Total ...	2,439	3,682·95	

APPENDIX X.

[See Chapter IV of the Report.]

Showing the results of the inspection of rent-rolls for the year ending 30th September 1909.

Government Estates.

Division and District.	Estate.	Total number of villages in the estate.	Total number of tenants.	Check by Tahsildars and other subordinate Agency.				Check by Managers and other superior Agency.*			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of un-reported mutations detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of un-reported mutations detected.
1	2	3	4	5	6	7	8	9	10	11	12
Burdwan Division.											
Midnapore	Majnamutha (Kukra-hati circle)	126	11,356	126	11,356	100	...	126	11,356	100	...
Ditto	Kasimchak ...	1	279	1	279	100	...	...	...	...	...
Ditto	Ghatal Khas Mahals	11	90	11	90	100	...	11	90	90	...
Presidency Division.											
Khulna	Chaukhali*	39	48	39	48	100	...	...	...	...	...
Do.	Mahammadshahi* ...	6	139	6	139	100	...	...	...	...	...
Patna Division.											
Patna	Government estates	94	8,349	66	7,149	84	39	62	5,123	61	49
Gaya	Ditto ...	84	4,075	84	4,075	100	6	27	337	7·6	3
Shahabad	Ditto ...	13	1,440	1	73	5	...	13	1,440	100	66
Tirhut Division.											
Saran	Mutha	2	235	2	235	100	19	...	...	...	...
Do.	Mahdhumanj ...	2	95	2	95	100	39	...	...	...	...
Darbhanga ...	Sukhtisarpur† ...	3	553	3	553	100	...	...	...	...	...
Do.	Hardaspur† ...	1	1	1	1	100	...	...	...	...	...
Do.	Bhagwatipur Andaman.†	11	497	11	497	100	...	...	...	...	...
Bhagalpur Division.											
Bhagalpur	Bhealpur Diara Khas Mahal	3	1,195	3	1,195	100	67	3	1,195	100	67
Ditto	Bhealpur sadar Khas Mahal.	3	39	3	39	100	...	3	39	100	...
Ditto	Monghyr Khas Mahal ...	5	632	...	...	...	...	5	625	100	34
Ditto	Town Khas mahal ...	13	5,000	14	700	46	65	13	600	39	15
Monghyr	Diara Estates in Sadar.	16	5,910	11	695	13	93	6	42	9	...
Do.	Diara Estates in Begusarai.	5	600	5	725	10	10	5	125	18	...
Do.	Taluka Bhowanand pur.	9	1,139	9	300	25	15	9	210	17	...
Do.	Other estates in Begusarai.	17	65	17	65	100	...	...	...	...	...
Do.	Other estates in Sadar.	16	2 3	11	665	43	15	16	211	43	...
Santhal Parganas ...	Amanat Sarkar Sarkari ...	1	180	1	180	100	19	1	18	8	8
Ditto	Mahal	1	267	1	267	100	17	1	35	6	6
Ditto	Gridihe Pokhpur ...	3	93	3	93	100	6	...	...	...	...
Ditto	Jagirnah Habildar	1	15	1	15	100	1	...	...	...	...
Ditto	Seycdpur ...†	1	91	1	91	100	3	1	30	33	3
Ditto	Amanat Sarkar Railway B. Class land No. 44.	9	123	9	123	100	3	3	51	17	...
Ditto	Nya Bazar	1	26	1	26	100	...	...	...	...	...
Ditto	Sahebgunj, No. 999. ...	8	2,229	...	...	...	...	...	...	...	...
Darjeeling	Terai Jotes	295	3,115	443	1,652	53	16	...	...	...	...
Ditto	West Teesta Khas Mahals.	21	1,388	21	1,388	100	...	14	1,260	73	...
Ditto	Kalimpong ...	46	5,535	46	5,535	100	94	26	1,950	35	39
Orissa Division.											
Cuttack	Banki	144	21,067	126	18,691	89	786	94	1,980	9	735
Do.	Town Khas Mahals ...	35	3,184	26	3,184	100	80	25	966	27	...
Balasore	Sajanagad Birse ...	194	11,617	9	2,021	17	109	...	...	...	...
Do.	Chandbali	1	138	1	138	100	6	...	...	...	...
Do.	Bhadrak Salt Gola ...	1	1	1	1	100	...	...	...	...	...
Puri	Khodhar	18	767	18	767	100	76	...	...	...	...
Sambalpur ...	Malguzari	119	5,973	116	5,701	96	...	59	1,980	33	...
Ditto	Thikadari	311	27,831	311	27,692	99	...	455	17,401	63	...
Ditto	Raiyatwari	14	214	14	194	91	...	4	98	15	...
Ditto	Zamindari	994	23,190	994	22,210	93	...	315	8,813	37	...
Chota Nagpur Division.											
Palamau	Government estates ...	269	16,474	269	16,474	100	...	134	10,910	66	...
Hazaribagh ...	Kodarma	101	3,674	61	1,077	29	76	3	...	...	...
Ditto ...	Giridih	23	2,175	17	328	15	61	13	...	...	...

* Separate figures for columns 9 to 12 not furnished.
† Figures for columns 9 to 12 not available.

APPENDIX X—*continued.*

WARDS' ESTATES.

Division and District.	Estate.	Total number of villages in the estate.	Total number of tenants.	Check by Tahsildars and other Subordinate Agency.				Check by Managers and other Superior Agency.			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported misstatements detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported misstatements detected.
1	2	3	4	5	6	7	8	9	10	11	12
Patna Division.											
Gaya	Deo Raja and Deo Rani's Estate.*	63	9,218	...	...	...	...	63	9,165	99·6	...
Tirhut Division.											
Saran	Hathwa	1,196	93,273	488	29,316	31	635	466	54,225	57	720
Do.	Chauteriat	36	2,411	20	600	60	...	...	...	...	...
Do.	Mobarak Husain* ...	3	249	3	100	29	...	...	...	...	...
Do.	Khajwa†	49	4,604	23	1,009	45	...	...	...	...	...
Champaran and Motaffarpur.	Bettiah‡	1,839	236,753	194	12,721	6	530	...	...	...	...
Muzaffarpur ...	Mahtha§	96	5,853	...	...	...	...	...	...	...	...
Ditto ...	Tamkohi§	68	4,227	...	...	...	...	...	...	...	...
Ditto ...	Shoohar§	157	10,900	157	10,900	100	...	4	43	·39	...
Ditto ...	Surundi§	157	6,872	...	...	...	...	...	...	...	...
Patna, Purbhanga, Muzaffarpur and Monghyr.	Narhan	196	23,449	196	23,449	100	2,247	63	2,5·9	9	183
Bhagalpur Division.											
Bhagalpur	Logma	23	1,763	23	1,763	100	...	...	...	...	...
Monghyr	Shahpur	27	1,658	27	1,658	100	...	...	...	...	...
Do.	Ratan¶	...	...	...	...	...	...	...	...	...	...
Do.	Bahadurpur¶	...	...	...	...	...	...	...	...	...	...
Do.	Sheikhpoora¶	...	...	...	...	...	...	...	...	...	...
Santhal Parganas	Pakour	83	11,693	83	11,693	100	23	41	4,678	40	183
Orissa Division.											
Cuttack	Darpan	307	23,111	315	12,887	55	134	55	926	4	...
Puri	Delang Hostabad ...	120	8,795	...	...	...	...	26	951	11	...
Do.	Do. Sarbarahkari	115	133	...	...	...	...	13	56	21	...
Do.	Sarbarahkari tenures (Garh Ghurondi and Kaipara.)	55	3,944	...	...	...	...	2	474	13	...
Chota Nagpur Division.											
Ranchi	Suradih	11	455	2	2	·41	...	...	...	...	...
Do.	Jamudag	5	246	2	2	1·03	...	3	17	6·91	...
Do.	Janampiri	3	295	1	1	·48	...	2	8	2·8	...
Do.	Jeria	61	1,978	5	5	·39	...	13	67	3·34	...
Do.	Kamabarahatu ...	3	200	...	...	...	...	2	6	3	...
Do.	Mardhan	10	497	...	...	...	...	2	3	1·05	...
Do.	Oregdaru	1	22	2	2	9·09	...	1	40	181·81	...
Do.	Rora	10	618	...	...	...	...	2	25	4·04	...
Do.	Serjamdih	3	574	...	...	...	...	4	47	8·2	...
Do.	Suri	15	715	2	2	·27	...	...	...	...	...
Do.	Sonahatu	20	659	...	...	...	...	2	21	3·1	...
Do.	Tamar	19	976	1	1	·10	...	5	9	9·1	...
Do.	Tarai	25	408	1	1	·24	...	5	27	6·61	...

* Papers prepared by zamatahs and patwaris and checked by manager.
† The manger reports that he checked about 50 per cent.
‡ Separate figures not given for columns 5 to 12.
§ The returns for this district are incomplete.
¶ No returns have been received for the Ratwar or Sanbarsa estates.
‖ No explanation has been offerred of the failure to inspect.

APPENDIX XI.

[*See* Chapter VI of the Report.]

Result of Inspection of Boundary Marks during the year ending the 30th September 1909.

Division and District.	Total number of estates surveyed under the Survey or Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
Burdwan Division.	GOVERNMENT ESTATES AND TEMPORARILY-SETTLED ESTATES.									
Burdwan ...	Not known	11	221	205	151	54	...	...	.....	...
Birbhum ...	3	3	14	14	10	4	...	4	Rs. 10 from Government grant.	...
Bankura ...	7	3	37	27	26	1	...	1	Annas 12.	...
Hooghly ...	9	15	133	120	113	6	1	...	.....	...
Howrah ...	43	51	123	123	115	8	...	2	Rs. 3 from Government grant.	...
Presidency Division.										
24-Parganas ...	32	32	1,895	730	704	2	24	16	(*a*) Rs. 17-5-0.	...
Nadia	46	27	527	505	453	45	7	39	Rs. 73-6-0.	...
Murshidabad ...	80	63	707	505	499	4	2	2	Annas 12 met from Khasmahal.	...
Jessore ...	26	2	28	28	7	15	6	10	Rs. 30 from Khasmahal.	...
Khulna ...	55	42	308(*b*)	235	213	15(*c*)	7(*c*)	1	Restored by the tenants.	
Patna Division.										
Patna	52	23	551	551	549	2	...	...	.....	...
Gaya	21	21	1,346	978	970	4	4	5	.....	...
Shahabad ...	31	62	881	781	717	17	47	...	.....	...
Tirhut Division.										
Saran	15	15	311	311	290	21	...	21	Without any cost.	...
Darbhanga ...	3	3	97	97	96	1	...	1	Restored at the cost of raiyats.	...
Bhagalpur Division.										
Bhagalpur ...	Not known	Not known	Not known	44	38	4	2	5	.....	...
Darjeeling ...	72	72	188	37	37	...	...	...	.....	...
Sonthal Parganas (*a*)	Not known	Not known	4,283	...	...	...	...	1,272	Met from settlement funds.	2 prosecutions. Some headmen fined Rs. 49.
Orissa Division.										
Cuttack ...	5,192	5,192	9,399	6,454	5,029	70	1,355	1,331	Cost borne by Settlement Department.	...
Balasore ...	3,505	1,491	7,006	3,592	2,383	38	171	196	Ditto.	...
Puri	493	493	Not known	2,399	2,105	266	27	182	Cost met by Khurda Sarbarakars.	...
Sambalpur § ...	1,936	1,857	56,220	56,220	55,636	191	93	253	.....	...
Chota Nagpur Division.										
Hazaribagh ...	2	3	364	220	178	30	12	...	.....	...
Ranchi	2	2	188	188	188	...	...	...	.....	...
Palamau ...	2	2	17,195	13,635	9,341	4,149	45	2,060	Restored by village headmen.	...
Singhbhum ...	6	6	784	751	332	19	...	...	.....	...
Total ...	11,737	9,490	103,857	87,960	81,181	4,966	1,808	5,403		

(*a*) Rs. 2-8 realised from the Chowkidars. Rs. 15 paid from Khasmahal contingent grant.
(*b*) Out of these 40 are pillars showing dilurion.
(*c*) 3 out of 15 marks damaged and 7 missing marks are dilurion marks.
(*d*) Surveyed under Regulation III of 1872.
§ Surveyed under section 37 of the Land Revenue Act of the Central Provinces.
N.B.—The figures against "Total" in columns 2, 3, and 4 are not complete for want of figures in certain cases.

Division and District.	Total number of estates surveyed under the Survey or Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 3.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
					WARDS' ESTATES.					
Patna Division.										
Gaya	64	79	648	393	373	...	20	...	.....	...
Tirhut Division.										
Saran	238	238	11,753	11,752	11,521	104	127	9	Rs. 8.	...
Champaran ...	1,695	1,695	Not known	5,787	4,331	624	832	3,984	Rs. 2,400-12-6.	...
Darbhanga ...	1	126	316	316	754	...	62	19	Rs. 75 met from estate funds.	...
Bhagalpur Division.										
Sonthal Parganas(*)	Not known.	Not known.	1,047	531	531	...	...	57	Met from settlement funds.	...
Orissa Division.										
Cuttack ...	2	2	591	370	343	4	23	23	Cost borne by Settlement Department.	...
Chota Nagpur Division.										
Ranchi	33	33	1,590	1,585	1,583	2	...	1	Cost borne by the villagers.	...
Total ...	2,033	2,183	16,245	21,284	19,485	734	1,064	4,092		
					ZAMINDARI ESTATES.					
Burdwan Division.										
Burdwan ...	72	61	256	256	251	1	4	3	.....	...
Birbhum ...	4	49	343	343	333	5	5	...	.....	...
Bankura ...	68	62	362	361	360	...	1	...	.....	...
Hooghly ...	...	8	32	32	32	...	...	...	.....	...
Presidency Division.										
Nadia	2	2	25	25	24	...	1	...		
Murshidabad ...	26	21	800	455	422	4	29	9	Restored by Settlement Department.	...
Jessore	2	4	86	86	85	1	...	...	.....	...
Khulna ...	6	6	344	206	203	...	3	...	.....	...
Tirhut Division.										
Saran	5,455	5,298	Not known	2,154	1,954	190	110	...	.....	...
Champaran ...	Not known.	Not known.	Ditto	1,109	881	128	100	...	.....	...
Bhagalpur Division.										
Bhagalpur ...	Ditto	Ditto	Ditto	10	10	...	...	...	.....	...
Sonthal Parganas (*)	Ditto	Ditto	14,051	8,283	6,725	80	1,478	2,571	Restored by Settlement Department.	
Chota Nagpur Division.										
Singhbhum ...	2	2	113	79	77	2	...	...	.....	
Total ...	5,632	5,502	16,417	13,404	11,262	411	1,731	2,583		
Grand Total ...	19,402	17,175	136,636	122,638	111,929	6,111	4,598	12,078		

(*) Surveyed under Regulation III 1872.

N.B.—The figures against "Total" and "Grand Total" in columns 3, 8, and 4 are not complete for want of figures in certain cases.

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ANNUAL REPORT

OF THE

DIRECTOR OF SURVEYS, BENGAL,

ON THE

SURVEY OPERATIONS IN BENGAL, (OTHER THAN CADASTRAL SURVEYS)

DURING THE YEAR

1908-1909.



CALCUTTA:
THE BENGAL SECRETARIAT BOOK DEPÔT.
1909.

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No. $\frac{1304}{T.R.—7}$.

From MAJOR R. T. CRICHTON, C.I.E., I.A.,

Director of Surveys, Bengal,

To the SECRETARY to the BOARD of REVENUE, LOWER PROVINCES.

Dated Dinapore, the 27th October 1909.

Sir,

I have the honour to submit my report on the survey operations in Bengal for the survey year ending 30th September 1909.

2. Captain F. C. Hirst was in charge until the 27th October 1908, when, on return from furlough, I took over charge of the Bengal Surveys, Captain Hirst retaining charge of the Eastern Bengal and Assam portion of the work.

3. The outturn of 3,367 square miles of traverse survey is up to programme.

4. On the 31st January 1909, the Secretary of State's despatch, sanctioning the formation of separate Survey Departments for Bengal, and Eastern Bengal and Assam, was received.

5. Although Captain Hirst and myself had different charges, it was not possible to entirely separate the clerical staff nor to remove the work of Eastern Bengal and Assam from the Drawing Office. Therefore, although the separation officially took effect from 31st January 1909 and I was appointed Director of Surveys in Bengal from that date, the actual separation of the Bengal Survey Office from that of Eastern Bengal and Assam was not made till March, and that of the Drawing Office, until 1st April.

6. The Bengal Survey Department, as now constituted, consists of two officers, seconded from the Imperial Branch of the Survey of India, with local designations of Director and Assistant Director of Surveys, Bengal, and 11 assistants. The assistants comprise two officers for charge of the traverse section and Bengal Drawing Office, respectively, four traverse assistants, two professional advisers for the main settlement operations in Bihar and Chota Nagpur, and three miscellaneous assistants for diara surveys, relaying boundaries, etc. The above strength does not include officers of the Imperial Standard-mapping Section of the Bengal Drawing Office nor of the Calcutta Surveys.

7. The whole of the ministerial staff of traversers, computers, etc., and the menial staff employed in Bengal has been taken over from the Survey of India, but as the scheme for the Bengal Survey Department did not settle the strength, rates of pay, etc., of these men, it was necessary to draw up a detailed scheme. This has been done and the proposals are under consideration.

8. During the year under report, a scheme for the compilation of standard maps has been drawn up, in consultation with the Surveyor-General of India, and has been approved by the Government of India and the Government of Bengal.

Under this scheme, the standard-mapping section still remains located in the same building as the Bengal Drawing Office, and the control thereof is still exercised by the Officer in charge, Bengal Drawing Office, and Director of Surveys, Bengal. The administration is now, however, entirely in the hands of the Surveyor-General who provides establishment and equipment, and the budget grant is included in that of the Survey of India. Thana and trijunction marks maps are to be compiled by the Provincial Drawing Office from the standard sheets.

As preliminary thana and trijunction marks maps are required during the attestation stage, *i.e.*, the season following the cadastral survey, it is evident that the standard-maping has to be kept up to date. With this object, it has been arranged that the pantograph reductions shall be made from reproduced copies of the village maps, instead of detaining the originals, and the Drawing Office is supplied, by the traverse section, with a chart showing co-ordinate values of trijunctions, required for plotting the sections of the standard sheets. The system is sound, its principal advantages being—

(*a*) saving of carriage and transfer of maps between the Imperial and Provincial Drawing Offices and consequent clerical work in invoicing, etc.;

(*b*) immediate control being in the hands of the local Director of Surveys; there is little chance of any available material for standard mapping being overlooked and the local Director can advise the Surveyor-General as to what material is likely to be of use; and

(*c*) saving in unnecessary duplication of work.

9. The present standard maps do not show any village boundaries, and, as village boundaries are essential for thana and trijunction mapping purposes, they are now shown in blue on the two-inch sections of the standard maps and thus, although they do not appear on the final standard maps, they can be traced off for the thana maps. The question of publication of a special provincial edition of the standard maps showing village boundaries will be put forward as soon as we have specimens ready of a standard map and thana maps of the same tract of country. The Bengal Government will then be in a position to say whether the special edition of the standards is required.

10. Under the present conditions, the standard-mapping section, in addition to the standard maps, compiles the traverse charts required for the Surveyor-General, but the list of co-ordinate values of village trijunction points, which accompanies these charts, is supplied by the Provincial Branch of the Drawing Office.

11. In paragraph 5 of last year's report reference is made to the intended amalgamation of the two traverse parties in Bengal. This amalgamation has been effected during January 1909 and the amalgamated parties have been designated "Traverse Section, Bengal Surveys."

The charge of the traverse section is a very heavy one, and although it has been most efficiently administered by Mr. A. W. Smart, an officer of exceptional experience and ability, it is probable that a division of the charge will be necessary in the near future.

12. In paragraph 12 of last year's report the transfer of the controlling office to Hazaribagh is mentioned. This, owing to the inaccessibility of Hazaribagh, has not proved an unmixed blessing and proposals were made, during the year under report, for removing the head-quarters and traverse section of the Bengal Surveys to Ranchi. These proposals entailed building houses for officers and although approved by Government could not be given effect to owing to the existing financial situation.

13. The new system of accounts has now been introduced in the amalgamated traverse section and in the Calcutta Surveys and is, therefore, now general throughout the Bengal Surveys.

14. In former seasons there has been considerable loss to Government on account of irrecoverable advances to *khalasis*. This applied particularly to the Sundarbans Survey where establishments absconded wholesale. New rules, whereby these advances are made by the district officers have been drawn up and approved.

15. The "diara" scheme, referred to in paragraph 11 of last year's report, was not given effect to during the year under report for want of funds. With the approval of Government, it will be tried experimentally in a small portion of the Ganges "diara" next season and extended if the experiment is successful.

16. During the year all the instruments in use in the Bengal Surveys have been made over to the Bengal Government free of further charge. In future no four per cent. charge on the cost of a survey will be made, but new instruments and repairs will be paid for.

17. It has been arranged that the Bengal Drawing Office shall undertake the reproduction and supply of index maps and diagrams for all departments of the Bengal Government, and rules fixing the rate of charges and simplifying the work, by reduction of unnecessary colours, have been approved and published.

18. Amongst minor changes in procedure, which have been introduced during the year, the following may be mentioned :—

(*a*) The rules for the supply of copies of traverse data have been revised, in consultation with the Director of Land Records, and have been approved by the Surveyor-General and the Bengal Government. An abridged form of the traverse table, omitting all unnecessary details, is now supplied direct to the district officers concerned.

(*b*) Rules for the entry of offsets in the traverse volumes have been revised, in consultation with the Director of Land Records, and the procedure simplified.

(*c*) Rules for conventional signs on thana maps, whereby confusion between village boundaries, *tola* boundaries, streams and roads is removed, and at the same time colouring avoided, have been issued.

(*d*) Special demarcation notice forms, whereby it is hoped demarcation will be improved and boundary disputes brought to notice at the preliminary stages of the work, have been approved and will be used in the Hazaribagh district next season.

19. Arrangements for the permanent marking of the subdivisions of the Panchannagram estate, mentioned in paragraph 112 of last year's report, have been made and the field work will be undertaken as soon as the tract is clear of water.

20. In paragraph 183 of last year's report mention is made of arrangements for safeguarding of maps and records against fire and the ravages of insects, and for providing extra rack accommodation for the revenue survey maps of the province. The scheme originally submitted proposed the erection of a new building for the record room. The modified scheme, as approved by Government, provided for :—

(*a*) complete separation of the existing record room by building a masonry wall, with an iron door, across it;

(*b*) unfiltered water supply with hydrants and hose, and purchase of minor appliances for dealing promptly with any outbreak of fire ; and

(*c*) substitution of iron racks for the existing wooden racks, and erection of new iron racks, of the same size as the wooden racks, thereby doubling the storage capacity of the record room.

Of the above (*a*) and (*b*) have been satisfactorily accomplished and as regards (*c*) the new iron racks have been erected, but, for want of funds, it has been impossible to pull down the old wooden racks and replace them by iron racks. If savings are available during the current financial year this work will be undertaken, but if not, it is hoped that it will be possible to undertake it early next year.

21. All the revenue survey and diara survey volumes of the province have been taken over and are now stored in the record room of the Bengal Drawing Office, and arrangements for taking over all the volumes of modern traverse data are in progress.

22. It has been arranged that the traces of the original maps, which up to date were kept in the record room along with the original maps, shall be stored in a separate building and it has been ascertained, through the Director of Land Records, that at least one copy of the vandyke maps is always available from district officers. Therefore, even should fire break out in the main record room, it will be possible to reproduce copies of the village maps and thus no irreparable damage is practically possible.

23. The wooden racks of the standard mapping, reproduction and badar sections of the Bengal Drawing Office have all been replaced by iron

racks and a portion of a verandah has been glazed in to provide accommodation for the packing and despatching of reproduced copies of maps.

24. Proposals for the purchase of machinery for graining zinc plates have been submitted and are under consideration. All graining up to date has been done by hand, but it can be better done by machinery and the saving in the pay bill of the graining establishment will, in little over a year, cover the initial cost of purchase of the necessary plant.

CHAPTER II.

PART I—REPORTS ON SURVEYS IN TEMPORARILY-SETTLED AND GOVERNMENT ESTATES UNDER SETTLEMENT OF RENTS AND LAND REVENUE.

Nil.

PART II—REPORTS ON SURVEYS IN PRIVATE ESTATES.

Shahabad District.

Traverse Survey.

25. The traverse programme, comprising thanas Shahpur, Piru, Dumraon, Buxar and Bikramganj, was notified in Government notification No. 4237L.R., dated 7th November 1908.

26. The total area of 1,563 square miles traversed, includes nine square miles of "diara" lands of thana Arrah.

27. Notwithstanding amalgamation of villages by the Settlement Department, there proved to be 2,939 villages in the area traversed.

28. The origin of survey was the same as that of last season, viz., the intersection of north latitude 25°15′ with east longitude 84°15′.

29. There were 29,935 new theodolite stations, which were marked by 28 *pucca* pillars, 5,311 stone prisms, 22,817 clay cylinders, and 1,779 pegs on boundary disputes.

30. Some of the old traverse stations of the 1875-76 survey in Gaya and of the 1879-80 survey of Ghazipur have been found and utilized in the present survey.

31. The traverse work has been tied down by connexions to nine stations of the great trigonometrical survey, and 113 azimuths have been observed and utilized for correction of angular work.

32. The season's work has been plotted on 3,027 sheets on the 16 inches= 1 mile scale.

33. All the computations are complete in every respect, and the 16 inch plots and *khakas*, also original four inch rough plots, have been despatched to the settlement officer. Also special two-inch reductions of the four-inch plots have been sent to the Bengal Drawing Office, for reproduction and supply of 25 copies to the settlement officer. The settlement officer will utilize them as his working *mujmullis*, thereby saving some tracing work.

34. The preliminary demarcation was fairly well done, and, although at the beginning of the season, there was some trouble in procuring attendance, as the work advanced, matters improved and help was everywhere readily afforded.

Hazaribagh District.

Traverse Survey.

35. The traverse operations in this district were notified in Government notification No. 4256L.R., dated 9th November 1908 and the programme consisted of thana Ramgarh (comprising outpost Gola), thanas Mandu and Gumiar, outposts Peturbar and Juridih (forming thana Kasmar) and outpost Nawadih of thana Dumurhi.

36. The area traversed was 1,486 square miles and comprises 913 villages.

37. The origin of survey adopted was the intersection of north latitude 24°00′ and east longitude 85°30′.

38. There were 39,461 new theodolite stations which have been marked with 1,264 local stones at trijunction points, 29,743 local stones and 2,087 marks on rocks *in situ* at intermediate stations, and 6,357 pegs on boundary disputes.

39. Five stations of the great trigonometrical survey have been connected with and 300 azimuths have been observed.

40. All the computations are complete in every respect and the season's work, plotted on 1,944 sheets on the 16 inch-scale, and the *khakas* have been despatched to the settlement officer. There are also 134 rough plots on the four-inch scale and 33 sheets of the two-inch reductions.

41. The difficulties in the survey, which have been considerable, may be summarized as follows:—(*a*) absence of preliminary demarcation, (*b*) apathy of the inhabitants in affording attendance and in pointing out boundaries, (*c*) incorrect lists of villages in the area for survey and (*d*) the very hilly nature of the country.

42. The difficulties as regards demarcation are only to be expected. Owing to there never having been any *mouzawar* survey before the present survey, the demarcation notices are dependent on the lists of villages received from the collectorate and these lists do not profess to be correct, moreover it is of course impossible to give the line clearing and traverse establishments any *mujmullis* to guide them during the course of the operations. In the present case the lists received from the Deputy Commissioner gave 1,807 village names whereas there proved to be only 913 villages as noted in paragraph 36 of this report. Steps have been taken to try and improve the demarcation and as the Deputy Commissioner, while on tour, has personally explained to the people what is required, better results may be expected in the future.

43. The greater portion of the tract under survey was broken ground with dense jungle and hills, rising to 3,440 feet, and the sub-tense bar had, therefore, to be constantly used instead of chains.

Manbhum District.

Traverse Survey.

44. The traverse survey of pargana Patkum was ordered in Government notification No. 4219L.R., dated 3rd November 1908.

45. The area traversed was 300 square miles, comprising 254 villages.

46. The origin of survey was the same as that of pargana Barabhum of last season, *i.e.*, intersection of north latitude 23°·30′ and east longitude 86°·30′.

47. There are no stations of the great trigonometrical survey within, or near, the area traversed, but as the work of last season was connected with four great trigonometrical stations and the Patkum work is bounded on the west and south by the Ranchi and Singbhum traverses, it has been easy enough to apply corrections and tie the work down to its true geographical position. Thirty-seven azimuths were observed.

48. There are 6,653 new theodolite stations which have been marked by 357 stone prisms at trijunctions, 83 cylinders, 4,940 local stones and 217 marks on rocks at intermediate stations and by 1,056 pegs along disputed lines.

49. The computations are complete in every respect and the 16-inch plots on 423 sheets, with *khakas*, have been despatched to the settlement officer. There are also 21 sheets of four-inch rough plots and four sheets of two-inch reductions.

50. The remarks about demarcation and attendance of the inhabitants and incorrect village lists, which have already been made about Hazaribagh, apply here also. The southern half of the tract under survey being jungly and hilly the sub-tense bar had to be frequently used.

Cuttack District—Pargana Killa Bishanpur.

Traverse Survey.

51. This pargana was traversed in 1894-95 for subsequent 2-inches=1 mile topographical survey. As the traverse stations of the topographical survey

(even if all of them could have been found) would have been insufficient for the requirements of the present cadastral survey, a fresh traverse was ordered in Government notification No. 1812T.R., dated 5th October 1908.

52. The area traversed is 18 square miles containing 42 villages.

53. The origin of survey was that of the Cuttack district survey, viz., intersection of north latitude 20°·29′ 0·68″ with east longitude 85°·54′ 28·61″ and the values of all co-ordinates have been reduced to this origin.

54. There are 710 theodolite stations in th s survey, of which 77 are stations of the survey of 1894-95, and the remaining points have been marked by 70 stone prisms, 283 cylinders, 145 local stones, and seven pegs on boundary disputes.

55. No great trigonometrical connexions were made, nor were they necessary as the work is connected to the old survey. Azimuth observations were taken at nine stations.

56. All the computations are complete in every respect and the 16-inch plots, on 53 sheets, were made over to the settlement officer.

PART III.—REPORTS ON MISCELLANEOUS SURVEYS.

Calcutta Surveys.

57. The following are the chief heads of the season's work .—

(*a*) Fair mapping of the suburban area.
(*b*) Fair mapping of the sheets showing revenue holding in the Panchannogram Government Estate in the suburban area.
(*c*) Completion of records of Panchannogram for submission to the Collector, and correction of papers after attestation.
(*d*) Completion of maps and records of the land acquisition survey, undertaken for the Port Commissioners.
(*e*) Completion of field sheets, and fair drawing of the Dhappa Survey, for the Corporation of Calcutta.
(*f*) Compilation of a wall map of Calcutta by municipal districts.
(*g*) Revision survey of Calcutta town.

58. *Fair mapping of the Suburban area.*—In paragraph 108 of last year's report the total programme was alluded to as 397 sheets. These 397 sheets have been reduced to 394, because three of the sheets contained so little detail that it could conveniently be shown on the adjoining sheets. The fair sheets have now all been completed, and fifty copies (48 in black and two in blue) reproduced and printed at the Bengal Drawing Office. The two blue copies will be required for any future revision or maintenance surveys and out of the 48 black prints, 13 have been coloured by hand in the Calcutta Surveys Office.

The 13 coloured copies and 25 black prints have been disposed of as follows :—1 coloured copy to be retained as the standard, *i.e.*, guide for colouring up future copies ; 5 coloured copies supplied to the Corporation, 7 coloured copies to Government officers concerned and 25 black prints to the Corporation. In addition, the Corporation, in order to hand over complete sets of maps to each district, have indented for 30 copies of each sheet which contains detail of two districts. This reproduction work will be attended to in the Bengal Drawing Office. The rates at which coloured and uncoloured copies will be available on sale to the public have just been decided.

59. *Fair mapping of the revenue sheets in the suburban area.*—These sheets are merely skeleton sheets showing the limits of the revenue holdings in the Panchannogram Government Estate. They are prepared, in two colours, on thin paper, so that they can be superimposed on the detail survey sheets which only show municipal holdings. In last year's report the programme was stated to be 510 sheets and 14 index maps, but the final figures are 512 sheets and 26 index maps. These have all been completed and despatched to the Bengal Drawing Office for reproduction and printing of 10 copies of each sheet. This work is making satisfactory progress and will shortly be completed.

60. *Completion of records of Panchannogram.*—The areas and limits of holdings, as found at the time of attestation, were corrected and the records made over to the attestation officer.

61. *Completion of work for the Port Commissioners.*—The field-sheets were completed and handed over to the land acquisition officer, also the maps, showing details to margin, were completed, vandyked, and made over to the Port Commissioners. The 16 inches=one mile wall map of this survey has been completed and will be handed over shortly.

62. *Completion of fields sheets and fair drawing of the Dhappa survey.*—All work connected with this survey has been completed during the year under report.

63. *Wall map of Calcutta.*—When the 16-inch=1 mile wall map of Calcutta was first proposed, the intention was that it should be in the nature of an index map, but it has now become a much more elaborate affair. The drawing of the suburban portion, showing all the details now required by the Corporation, has been completed, but final instructions as to the hatching of public and other masonry buildings have only just been received.

64. *Revision survey of Calcutta.*—This item of work has been much delayed owing to non-receipt of intimation of provision of funds. This work is paid for in equal shares by Government and the Corporation. The Government contribution was notified in due course, but the Corporation did not pass the estimates until July. The scheme and estimates, submitted by Captain Hirst, provided for a record of occupancy, a maintenance scheme, and for reproduction of maps by the Corporation, (*vide* paragraph 100 of last year's report) but the Chairman of the Corporation pointed out that for the compilation and maintenance of a record, legislation would be necessary, and he also considered that, as the maps are being made under Government authority, the reproduction thereof should be done by a Government officer. There were also differences as to the number of copies which should be printed. I had an interview with the Chairman, and, in order to remove the existing dead lock, I revised the scheme and estimates, omitting the record of occupancy and maintenance, also I agreed to undertake all reproduction of the maps at the Bengal Drawing Office and I reduced the number of coloured copies to be supplied in accordance with the latest figures. The Chairman approved of the revised scheme and estimates, but as stated above it was not till July that the provision of funds was made.

65. In this connexion I desire to say that I am entirely in accord with Captain Hirst's remarks as to the desirability of a record of occupancy by municipal holdings and maintenance thereof. The actual revision survey is now in progress and will shortly be completed. The maps thereof will show the limits of municipal holdings and schemes for the maintenance of the maps are receiving consideration. However successful the maintenance may prove, I think it is obvious, that, if a record of occupancy is considered advisable, the sooner it is taken up the better.

66. The actual field work in connexion with the revision of the maps of the Calcutta town commenced on 15th March 1909, the procedure adopted being shortly as follows. The zinc plates of the original survey were obtained from the Surveyor-General's office and blue prints therefrom made in the Bengal Drawing Office. The surveyors made all necessary corrections on these blue prints, commencing and closing their chain measurements on fixed points, such as corners of buildings, etc., which had not altered, and also kept up a trace to guide the draftsmen in office, showing all additions and alterations.

67. The total number of sheets for revision, including sheets common with the suburban area, but excluding the *Maidan, which does* not come into the programme, is 187, and of these, 163 have been topographically revised during the year under report. The area comprised in the total of 187 sheets is approximately six square miles of which five square miles have been dealt with. The changes which are numerous are generally of the following nature:—

(*a*) *Busties* entirely removed and replaced by residential masonry buildings.
(*b*) Roads with side walks added.
(*c*) New drains, extra lamp posts, etc.

The inking up of the corrected blue prints is making good progress.

68. It was originally intended that the final revised maps should be reproduced from the old zinc plates, but the state of these plates, owing to corrections already carried out thereon (there has been an establishment of one or two surveyors retained by the Surveyor-General for several years for revision and maintenance purposes) and other causes, is such as to make this intention impossible to give effect to.

It will be necessary to redraw the sheets, and, incidentally, advantage of this necessity will be taken to redraw and reproduce them in the same style as the lately completed sheets of the suburban area, but this work cannot be satisfactorily and economically undertaken until the demarcation is well advanced.

69. In order to have some figures for average rates of progress for a maintenance scheme, 806 acres, in the suburban area, were revised during the year under report. Besides providing useful and much required figures, this experimental operation points out the necessity of an early revision and maintenance of the whole of the maps of the suburban area. The changes are very great, owing to acquisitions, by Government, the Corporation and Eastern Bengal State Railway and to new roads through *bustí* sites and realignment of other roads. In fact, the existing topographical features in many tracts, are rapidly disappearing and a revision survey and maintentance, unless undertaken shortly, will be impossible without expensive retraversing.

70. Government has sanctioned the demarcation and record of revenue holdings in the town area. This work will be started shortly. In the meantime, copies of the registers in the office of the Collector of Calcutta have been made, and as these give, in most instances, the names and addresses of owners, and have been presumably kept up to date under the Registration Act, they should prove very useful in the issuing of demarcation notices. The main difficulty to be anticipated is in dealing with lands which have been acquired by the Corporation. In such cases, the lands are rarely marked off with pillars or stones immediately on acquisition, and subsequent demarcation, where all the topographical features have been cleared off, is extremely difficult. This has been pointed out to the Chairman who has issued orders which will improve matters.

Monghyr District.

71. *Traverse survey of Monghyr town khas mahals.*—The traverse survey of four town *khas mahals*, viz., Military Bazar, Kasba Monghyr, Bahadurpur Jiwat and Kemkha, was required by the Collector and was sanctioned by the Board of Revenue, Lower Provinces.

72. The survey comprises 191 acres and has been plotted on 23 sheets on the scale of 64 inches=1 mile.

73. There are 334 theodolite stations which have been marked by 106 iron pegs and 228 cylinders.

74. *Relaying boundary of Basdeo Taufir.*—The relaying of the Ganges diara survey boundary of 1865-66 between mauza Basdeo Taufir and mauzas Bhelwa and Harprasad was undertaken at the request of the Additional Sub-Judge of Monghyr.

75. The length of boundary relaid was 2·75 miles and it has been marked by 44 masonry pillars.

76. On completion of the field work, the Sub-Judge directed the traverser to see to the building of the masonry pillars and to make over possession of the land to the decree-holder. It was pointed out that the building of the pillars was not allowed for in the estimate of the survey portion of the work nor was it in the province of a traverser to make over possession, and therefore the Survey Department would disclaim responsibility. The Sub-Judge, however, insisted on his instructions being carried out and this extra work has, therefore, been done, funds being provided by the Sub-Judge.

Purnea District.

77. *Nepal boundary* —This work consisted of the marking of the positions of wooden boundary posts Nos. 19, 20, 21, and 22, which had all been lost.

78. It was found that the bed of the Kankai river now occupies the position of wooden post No. 19 and as it was therefore useless to erect another post on this spot, the point has been marked by four reference posts and the Collector was requested to have *pukka* pillars built at these points without delay.

79. The Subdivisional Officer of Kishangunj and a representative of the Nepal Darbar were present at the fixing of the wooden posts Nos. 20, 21, and 22, of which No. 20 was found to be in existence at its proper point, but without a number, which has been seen to.

80. *Pargana Dharampur—Government estates.*—The relaying of the 1844-45 boundary of the Government estate in tauzi No. 214 was undertaken at the request of the Collector. The estates comprise No. 119, Chandpur Bhugaha Milik, in two portions, No. 203 Mirza Mimzan Beg Chakla and Nos. 205 and 206 Soharia Sobhai.

81. The work entailed 75 theodolite observations and 17·25 linear miles of chaining. The estates have been plotted in five sheets on the 16-inch scale and the boundary demarcated shown and the sheets made over to the settlement officer.

District Sonthal Parganas.

82. *Relaying stations of Shamganj-Deoghar bazar.*—The relaying of lost traverse stations in mauza Shamganj was undertaken at the request of the settlement officer.

83. The number of stations relaid was 77, which have been marked by 15 stones, 38 iron pegs, 23 wooden pegs and one mark on rock.

Darbhanga District.

84. *Relaying boundary of Government estate, Chaparsan.*—In paragraphs 143 and 144 of last year's report, mention was made of the relaying of this boundary according to the Ganges diara survey of 1865-66. The work of the year under report was the relaying of the boundary of the revenue survey of 1842-43. The length of boundary relaid is 1·10 miles.

Shahabad District.

85. *Relaying boundary of Bhedia and Taufir Bhedia.*—The Collector applied for the services of a traverser to point out the boundary relaid last season (*vide* paragraphs 129 and 130 of last year's report) with a view to the permanent marking thereof. Also a small portion of the demarcation which had to be left over last year on account of the tract being under water, had to be attended to. The necessary work has now been done and the boundary pointed out to the Settlement Sub-Deputy Collector and to an amin of the Dumraon Raj.

Darjeeling District.

86. *Nepal boundary.*—Under orders from the Government of Bengal (Political Department) the completion of the marking of the boundary on the Mechi river has been undertaken.

87. The following points were fixed:—No. 46, one reference pillar in addition to those existing; No. 47, three reference pillars; No. 48, one reference pillar in addition to those existing; Nos. 57, 58 and 59, each, two reference pillars; No. 60, four reference pillars; No. 61, six reference pillars; Nos. 62 and 70, each two reference pillars.

88. There are 29 new reference pillars laid down. Point No. 62 was originally main pillar No. 62, consisting of iron rails with a concrete base which was washed away.

Gaya District.

89. *Relaying boundary of Faldu and Rampur Hanria.*—The revenue survey boundary of 1842-43 has been relaid at the request of the Collector.

90. The length of boundary relaid was 1·20 miles which has been marked by 30 mounds, which have been pointed out to the Manager, Court of Wards Estate.

PART IV.—REPORT ON THE BENGAL DRAWING OFFICE.

91. *Standard mapping section.*—As explained in paragraph 8 of this report, the work of this section is entirely confined to compilation of standard maps and traverse charts, and the establishment belongs to the Survey of India and not to the Bengal Survey Department, but as the final thana maps, trijunction marks maps, and district maps, which are all provincial items of work, are all dependent on the progress of standard mapping, and as the control of this section (although under the administration of the Surveyor-General) is exercised by the Provincial Director of Surveys, it is advisable to include the report thereof in the general report of the Bengal Surveys.

92. Under the procedure lately approved for the compilation of preliminary standard maps, the programme of this section may be considered under four main heads, viz:—(*a*) the yearly recurring programme of approximately 3,200 square miles, (*b*) the urgent additional programme of 9,051 square miles of districts Sambalpur and Sonthal Parganas, (*c*) the urgent arrears programme of 9,065 square miles of districts Purnea, South Bhagalpur, South Monghyr, Patna and thana Arrah of district Shahabad and (*d*) the non-urgent programme of 7,000 square miles of district Ranchi.

93. The yearly recurring programme of 3,200 square miles refers to the material which may be expected yearly from the cadastral surveys, in accordance with the present rate of progress of the Bengal Surveys.

94. The programme of 9,051 square miles of Sambalpur and Sonthal Parganas is, owing to the late inclusion of this work in the standard-mapping programme, in accordance with the requirements of the Bengal Government, and with the approval of the Surveyor-General.

95. The urgent arrears programme of 9,065 square miles requires explanation. Owing to a misunderstanding of the intentions of the Government of India as to the future utilization of cadastral material for compilation of standard maps, no special arrangements were made, during the past two years, for dealing with this item of work and a scheme for the compilation of elaborate thana maps was under consideration instead.

96. The compilation of standard maps of district Ranchi was not under consideration until lately as it was at first thought, that, owing to the uncultivated portions not having been surveyed in detail during the course of the cadastral operations, the available material would not be of much use for preliminary standard maps, but as the result of a report submitted by me, after comparison of the new material with the new thana maps and the old topographical maps, the Surveyor-General has approved of the compilation of preliminary standard maps. As the supplementary topographical survey is not imminent and as preliminary thana maps have already been compiled by the Settlement Department, this item of the programme is not urgent and will be attended to as opportunity offers.

97. In order to deal with the large programme of this section arrangements have been made with the Surveyor-General for strengthening the staff of draftsmen, whereby, in addition to the staff required for dealing with the yearly recurring programme of 3,200 square miles, a temporary extra staff, sufficient for the completion within three years of all the other items of work, is under provision.

98. It is evident from the foregoing remarks that the existing strength of the standard mapping section did not admit, during the year under report, of the compilation of standard maps with sufficient rapidity to allow of thana maps being compiled therefrom, but, in consultation with the Director of Land Records, Bengal, satisfactory arrangements have been made, whereby preliminary thana maps, to meet urgent requirements, are being provided and it is hoped that, from next season onwards, the scheme will be working in its entirety.

99. During the year under report 20 standard sheets of Bengal and two standard sheets of Eastern Bengal and Assam have been submitted for publication. The numbers of the sheets are as follows:—

Nos. $72\frac{N}{11}$, $\frac{O}{4}$, $\frac{O}{6}$, $\frac{O}{7}$, of the Purneah and Bhagalpur districts; Nos. $79\frac{B}{12}$, $\frac{B}{16}$, $\frac{C}{1}$, $\frac{C}{5}$, $\frac{C}{6}$, $\frac{C}{7}$, $\frac{C}{8}$, $\frac{F}{3}$, $\frac{F}{4}$, $\frac{F}{7}$, $\frac{F}{8}$, $\frac{F}{11}$, $\frac{F}{12}$, $\frac{F}{15}$, $\frac{F}{16}$, $\frac{G}{2}$, $\frac{G}{6}$, $\frac{G}{11}$, and $\frac{G}{15}$ of the Khulna and 24-Parganas, Sundarbans, and Nos. $79\frac{K}{1}$, and $\frac{K}{5}$, of district Backergunge.

100. Thirty standard maps are in hand, of which seven, viz., Nos. $72\frac{N}{13}$, $\frac{N}{16}$, $\frac{N}{18}$, $\frac{O}{9}$, $\frac{O}{10}$, of district Purnea and Nos. $79\frac{P}{5}$ and $\frac{P}{14}$ of the Khulna, Sundarbans are nearly complete. Two sheets; Nos. $272\frac{K}{11}$ and $\frac{K}{15}$ of North Monghyr and Bhagalpur only await supply of thana lists giving correct spelling of village names. Seven sheets viz., Nos. $72\frac{O}{15}$ and $\frac{O}{14}$ of Purnea, Nos. $72\frac{K}{6}$, $\frac{K}{12}$, $\frac{L}{4}$ of South Monghyr No. $72\frac{P}{7}$ of Sonthal Parganas and No. $64\frac{O}{16}$ of Sambalpur have all details transferred in pencil, and the balance of 14 sheets of Monghyr Sonthal Parganas and Sambalpur have all been projected and are in different stages of plotting, and the transfering of details will commence shortly.

101. The reduction work is well advanced, and, as far as current work is concerned, the reductions are made immediately on receipt of the reproduced copy of a village map.

102. Thirty-eight traverse charts have been submitted for publication during the year under report, their numbers being as follows:—

Nos. $72\frac{P}{11, 12, 15, 16}$, $\frac{Q}{3, 4, 9, 10, 13, 14}$, $\frac{J}{3, 4, 7, 8, 11, 12, 14, 15, 16}$, $\frac{K}{1, 2, 5, 6, 9, 10, 13, 14}$ $73\frac{B}{1, 2, 5, 6, 7, 9, 1}$ and $79\frac{N}{9, 10, 13}$.

There are 22 traverse charts in hand, of which the last remaining chart of Chittagong, No. $79\frac{N}{16}$, is complete and will be submitted at once for publication. The remaining charts await decision as to whether a special provincial edition of the standard sheets showing village boundaries (*vide* last portion of paragraph 9 of this report) will be published. If there is such an edition, all traverse charts of Bengal, except any that may be required urgently by the Surveyor-General for supplementary topographical surveys, will simply be traced from this edition, but if there is no edition of the standard sheets showing village boundaries, special compilations will be necessary, utilizing the village boundaries as given in the thana maps.

103. The following items of work have been done for the map publication office of the Survey of India:—

(*a*) Twenty-eight grey prints have been coloured.

(*b*) Fiscal limits and cultivation have been coloured on 42 black prints.

(*c*) Forty-nine uncorrected proofs have been examined and corrected.

Also 54 published proofs of maps have been coloured.

Provincial Drawing Section.

104. This section deals with thana, trijunction marks and district maps, and all miscellaneous and extra departmental works such as completion of index maps, diagrams for other departments, etc.

105. *Thana maps.*—During the year, maps of six thanas, viz., Katauria of district Bhagalpur, Gopalpur, Kasba Amur, Kadwa and Katihar of district Purnea, and Satkhira of district Khulna, have been prepared on the bases of 2 inch *mujmulis* maps supplied by the Settlement Department. These thana maps are on 13 sections and 200 copies of each have been reproduced and supplied.

106. Also seven thana maps, compiled by the Settlement Department, have been compared and 200 copies of each reproduced and supplied These maps are of thanas Ghatsila of district Singhbhum, Jhargram of Midnapore, Angul, Purnakote, Bantala, Jarpara and Chhendipada of district Angul, and are comprised on 10 sections.

107. *Trijunction marks maps.*—Fourteen thanas have been dealt with during the year under report. Of these, the trijunction maps of 4 thanas, viz., Gopalpur, Kasba, Amur, Katihar and Kadwa of district Purnea, have been prepared on special two-inch plots on 25 sections and altogether 107 copies reproduced and supplied. The trijunction map of the Dibi Bhadra estate of thana Satkhira, district Khulna, was compiled in two sections and 30 copies of each supplied. The map of thana Katauria, in 11 sections, was compiled from *mujmulis* supplied by the Settlement Department and 18 copies of each sheet supplied. The trijuction maps of Ghatsila of district Singbhum, on 10 sheets, and of Jhargram of district Midnapore were sent by the settlement officers for examination and direct reproduction of 34 copies of each. Three copies, of altogether 18 sections, of the trijunction marks maps of thanas Chandagram, Comilla, Nabinagar, Kasba, Brahmanbaria and Lakshan of

district Tippera have been printed for the Eastern Bengal and Assam Government.

108. *Miscellaneous work.*—The compilation of the special Ganges diara map, on four-inch scale, to show revenue survey and diara survey boundaries, as well as boundaries according to the latest surveys, with positions of special permanent marks, is in progress. Other miscellaneous work, including preparation of a map of Parikud, new index maps of the province showing progress of surveys and settlements, diagrams and charts for other departments of the Bengal Government and for the Government of Eastern Bengal and Assam, has been undertaken. In all 11,500 copies (of which a considerable number are in colours) of miscellaneous maps have been turned out and supplied. Also copies of 169 village maps of the revenue, diara and cadastral surveys have been supplied to applicants.

REPRODUCTION SECTION.

109. The total outturn of work accomplished by this section during the year under report was, 22,851 plates vandyked, 510,806 copies printed and 480,343 copies despatched. The outturn of copies printed is very much less than last year, but the number of maps and plates dealt with is greater by 3,627. It is, therefore, evident that the reduction of outturn is due to a smaller average number of copies of each map being called for.

110. *North Monghyr.*—The 17,000 copies, remaining to complete the programme of this district, (*vide* paragraph 157 of last year's report) have been reproduced and despatched.

111. *South Monghyr (Season 1906-07).*—The programme is 2,391 sheets. After 2,217 sheets with 75,790 copies had been reproduced and printed, it was decided to revert to the system of calculating the number of copies by Khatians. Figures, according to the new estimate, have been supplied by the Settlement Department, except for 126 sheets, and, in accordance with the revised figures, 463 sheets have had to be re-vandyked, out of which, 369 with 16,928 copies, have been printed. Of the total of 92,718 copies printed during the year, 64,003 copies of 1,354 sheets have been despatched.

112. *Purnea (Seasons 1887-89).*—The total programme proved to be 375 traces (not 372 as given in paragraph 158 of last year's report) of Srinagar-Banaili Raj villages. During the year under report, 57 sheets were vandyked, 1,260 copies printed and 2,080 copies despatched, which completed the programme.

113. *Purnea (Seasons 1903-07)*—Four thousand four hundred and fifty-three additional copies of 638 sheets were printed and supplied to the settlement officer, at his special request.

114. *North Bhagalpur.*—The remaining 44 sheets (*vide* paragraph 161 of last year's report) have been vandyked, 880 copies printed and 4,440 copies despatched, during the year under report. Also 1,667 copies of 83 sheets were supplied to the settlement officer and Collector on their special requisitions.

115. *South Bhagalpur (Season 1905-06).*—Out of the total programme of 2,278 sheets, (*vide* paragraph 162 of last year's report) 24 sheets with 1,600 copies remained over for reproduction. This work has been completed and the copies despatched.

116. *South Bhagalpur (Season 1906-07).*—The total programme was 693 sheets, excluding 18 hill sheets of thana Katoria not for reproduction. The remarks in paragraph 111, as to alteration in the programme for number of copies, apply here also; consequently, after 642 sheets, 16,665 copies had been reproduced and printed, 76 sheets had to be reproduced again and 2,567 copies printed. Out of the total of 19,232 copies printed, 18,908 have been despatched.

117. *Ranchi (Season 1905-06).*—In paragraph 164 of last year's report it was stated that the reproduction of this season's work had to be postponed owing to other urgent work. The programme was 1891 sheets with 37,820 copies, all of which have been reproduced, printed and despatched during the year under report.

118. *Ranchi (Season 1906-07).*—The programme was 1,073 sheets, 21,460 copies, all of which have been reproduced, printed and despatched.

119. *Dalbhum Estate—districts Singhbhum and Midnapore.*—The whole programme of 1,373 sheets, 27,460 copies has been dealt with and the sheets despatched.

120. *Midnapore—Nayabasan and Rohini.*—The amount of work remaining to complete this programme, (*vide* paragraph 169 of last year's report) was 298 sheets for reproduction, 27,161 copies to be printed and 29,391 for despatch. This has been done during the year under report.

121. *Midnapore—Parganas Dorudumnan and Jalamuthi.*—Out of a programme of 384 sheets, 266 have been reproduced, 9,256 copies printed and 8,701 despatched.

122. *Murshidabad—Beldanga and Fatehsingh estates.*—There were 232 traces for reproduction (not 213 as mentioned last year). During the year 102 traces have been reproduced and 18,972 copies printed and despatched, which completes the programme. Also 40 additional copies of one sheet were supplied to the settlement officer.

123. *Murshidabad—Mahisar estate.*—Eight traces have been reproduced and 2,779 copies supplied.

124 *Gaya—Maksudpur estate.*—The 275 traces prepared last year have been reproduced and 5,500 copies printed and supplied.

125. *Angul.*—There were 1,016 traces for reproduction in connexion with the new settlement. This work has been done and 20,320 copies printed and despatched.

126 *Balasore.*—There are approximately 4,373 traces for reproduction, in connexion with the revision survey and settlement, of which copies are being supplied in accordance with estimates from the settlement officer. These traces are received in batches. During the year 2,599 have been reproduced, 93,300 copies printed and 90,665 copies supplied.

127. *Dihi Bhadra estate, Khulna and 24-Parganas.*—The total programme was 169 sheets and 8,906 copies. This has been carried out during the year under report and the copies supplied.

128. *Puri—Jagir Mahals.*—The programme of 258 sheets and 5,160 copies has been dealt with and the copies supplied.

129 *Champaran.*—Two hundred and forty-one sheets were vandyked, and 2,410 copies printed and supplied to the Collector. This work was sanctioned in Government order No. 1551 T.R., dated 3rd July 1909.

130. *Eastern Bengal and Assam.*—Six hundred and seventy copies of 67 sheets of Chittagong were supplied to the Collector, and 3,500 copies of 70 sheets of Backergunge to the settlement officer.

131. *Reproduction for attestation.*—The entire programme of reproduction of village maps, for attestation purposes, has been completed during the year. The total outturn of 5,669 sheets, 27,850 copies, is made up as follows:—Patna 2,227 sheets, 13,373 copies: Shahabad 599 sheets, 3,374 copies: Monghyr 23 sheets, 92 copies: Purnea 4 sheets, 16 copies: Ranchi 1,765 sheets, 6,445 copies: Singhbhum 19 sheets, 57 copies: Manbhum 1,032 sheets, 4,473 copies.

132. *Reproduction of thana maps.*—The details of the reproduction of of 4,600 copies of 23 sheets for the provincial drawing section are given in paragraphs 105 and 106 of this report.

133. *Reproduction of trijunction marks maps.*—The details of the reproduction of 738 copies of 67 sheets is given in paragraph 107 of this report.

134. *Unforeseen.*—The sum of Rs. 1,000 was allotted by Government in order to meet unforeseen demands from Collectors whose supply of village maps was running short. This amount has proved quite insufficient to cover even the first half of the financial year and several special allotments have been necessary. The total outturn to date, to supply the demands of the Collectors of districts of Bihar and Balasore, has been 730 sheets, 6,243 copies. Also 1,304 copies of various maps, *mujmulis* and forms were supplied to the Director of Surveys, and to settlement officers.

135. *Miscellaneous work.*—In addition to the 11,500 copies referred to in paragraphs 108 of this report, a considerable amount of work, amounting, in all, to 1,797 plates, 28,590 copies, has been done out of office hours, on book debit payments, for the Calcutta Surveys, Calcutta Corporation, settlement officers, etc.

Badar Section.

136. Including the "badars" of 51 villages of Midnapore remaining over from last year, the total number of villages, for which "badars" have been received for the several districts of Bengal, amounts to 722, all of which have been dealt with as they arrived. There are no arrears.

Headings and adjoining names on 592 sheets have been altered in accordance with thana lists.

Village names have been corrected and thana numbers entered of 3,052 villages in the traverse volumes and of 8,512 villages in the traverse field books.

The words "Made and published by the authority of Government" have been typed on 5,954 original sheets. This work was stopped during the year, as it serves just as well to vandyke the inscription on to the zinc plates, and thereby save time in hand typing.

Map Record Section.

137. The improvements, carried out during the year, to make the record room as fire proof as possible, are mentioned in paragraph 20 of this report.

138. The section has received, during the year under report, 3,985 original sheets of village maps of Bengal, making a total to date of 96,823 sheets stored in the record office, Lists, either thanawar or parganawar, have been made for 3,600 sheets, making a total of 85,968 sheets of which lists are complete. The final lists of the balance of 10,855 sheets are being prepared as the thana jurisdiction lists are received.

139. The pasting of printed serial numbers on the sheets is practically up to date. Each compartment of the racks is cleared out periodically and the sheets examined, and broken edges and other minor repairs attended to.

140. The revenue and diara survey volumes, and volumes of traverse data belonging to these surveys, amounting in all to 834 volumes, have been taken over from the Survey of India and arranged in the racks.

141. There are, including 3,881 traces of Murshidabad, Angul and the Balasore revision survey received during the year, altogether 56,719 traces of original maps stored in the map record room, but, as stated in paragraph 22 of this report, these are being stored elsewhere as rapidly as possible.

142. There are also 3,015 miscellaneous maps, such as thana and trijunction mark maps, originals and *mujmullis*, rough traverse plots and index maps on various scales, etc., stored in this section.

CHAPTER III.

PART I.—TOURS OF THE DIRECTOR OF SURVEYS.

143. I have been in the field and on tour of inspection for 250 days. I have inspected all sections of the Bengal Surveys frequently, both during the field and recess seasons. I have examined the village maps of the cadastral camps of the Bihar and Ranchi settlement parties, both during field and recess, and a very large proportion of the independent "partals" of both parties. I have also personally done some "partalling" in the field of some of the Bihar cadastral work. Owing to pressure of other urgent work I was unable to do any personal "partalling" in the field of the Ranchi cadastral work.

144. I am satisfied that the detail survey of both these settlements is being carefully checked and is fully up to the same standard as when the cadastral surveys were under my control. The drawing and finish of the field plans has, if anything, improved, as all inking up (with the exception of field numbers) is now done by trained establishments.

145. I accompanied the Director of Land Records to Sambalpur, at his request, to advise on the question of elimination of error in the trace maps of that district.

146. I have been in constant consultation with the Surveyor-General of India regarding the scheme for the standard-mapping work and I accompanied the Surveyor-General when he visited the Bengal Drawing Office.

PART II.—SERVICES OF OFFICERS.

147. Mr. A. W. Smart, in charge of the traverse section, has had a very heavy charge which he has managed with his usual thoroughness and careful attention to all details.

Mr. L. F. Berkeley, in charge of the Bengal Drawing Office, has shown marked ability in the management of the many sections of his office.

Mr. R. B. Smart, in charge of the Calcutta Surveys, has had a peculiarly intricate and uncongenial task which he is dealing with very successfully.

Mr. E. G. Hardinge, in direct charge of the standard-mapping section of the Bengal Drawing Office, has worked hard and well.

Messrs C. S. Kraal, J. C. Lears, L. B. Fitzgibbon, P. D. Gomes and B. C. Gasper and the supervisors of the Bengal Drawing Office and Calcutta Surveys have all worked well.

148. The relations between the Settlement and Survey Departments have been excellent throughout the year under report, and I have to thank Mr. H. McPherson, I.C.S., Director of Land Records, Bengal, for his very cordial attitude to all the work of my portion of the combined operations.

I have the honour to be,

SIR,

Your most obedient servant,

R. T. CRICHTON, MAJOR, I.A.,

Director of Surveys, Bengal.

APPENDIX I—PART A.

Summary of the outturn of work of the survey parties in Bengal for 1908-09.

District.	Traversing.				
	Number of villages.	Linear miles of chaining.	Number of stations at which theodolite was set up	Number of Azimuths.	Number of sub-traverses.
1	2	3	4	5	6
Private Estates.					
Shahabad	2,939	6,578	39,882	113	2,023
Hazaribagh	913	4,932	14,599	300	1,676
Manbhum (Pargana Patkum)	254	1,127	3,041	37	448
Cuttack (Killa Bishanpur) ...	42	107	710	9	23
Miscellaneous.					
Monghyr Town	4	22	334	...	...
Do. Basdeopur Taufir ...	...	13	47	...	...
Purnea, Pargana, Dharampur (relaying boundary of Sohoria Sobhai).	2	17	75	...	...
Darbhanga (relaying boundary of Raspur Patasia and Chapparan).	...	4	9	...	...
Sonthal Parganas (relaying lost stations in mouza Shewganj).	...	10	77	...	...
Gaya (relaying boundary between mouza Fulda and Rampur Handia).	2	11	32	...	...
Total ...	4,156	12,821	93,806	459	4,170

APPENDIX I—PART B.

Statement of outturn and cost rates.

District and Estate.	Description of work.	Estimated area to be dealt with in square miles.	Year of inception of operation.	Area surveyed in square miles. During the year under report.	Area surveyed in square miles. Totals including previous years.	Cost rate per square mile. During the year under report.	Cost rate per square mile. From beginning to end of the year under report.	Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.
1	2	3	4	5	6	7	8	9	10	11
Private Estates.									Rs.	
Shahabad	Traverse	4,373	1907	(a)1,563	1,910	34·6	35·3	2,463	74,000	33·3*
Hazaribagh	Ditto	7,021	1908	1,486	1,486	33·8	33·8	5,535	1,83,000	33·3*
Manbhum (pargana Patkum) ...	Ditto	600	1908	300	300	31·7	31·7	Nil	Nil	31·7*
Cuttack (Killa Bishanpur)	Ditto	10	,,	10	10	61·6	61·6	,,	,,	61·6†
Miscellaneous.										
Monghyr (town Khas Mahals)	Ditto	...	1908	191 acres	191 acres	...	...	Nil	...	...‡
Do. (Basdeopur Taufir)	Ditto	...	,,	(b)12·75	(b)12·75	...	...	,,	...	...§
Do. (pargana Dharampur relaying boundary of Sohoria Sobhai.)	Ditto	...	,,	...	...	...	...	,,	...	...§
Darbhanga (relaying boundary of Raspur Patasia.)	Ditto	...	,,	(b)11·75	(b)11·75	...	...	,,	...	...§
Sonthal Parganas (relaying lost stations in mouza Shewganj, Deoghar Hazar.)	Ditto	...	,,	...	...	...	...	,,	...	...§
Gaya (relaying boundary between mouza Fulda and Rampur Handia.)	Ditto	...	,,	(b)1·80	(b)1·80	...	...	,,	...	...§
Total traverse ...	...	11,718	...	3,367	3,714	...	...	...	...	...

(a) Includes 9 square miles of diara lands of Ibana Arrah.
(b) Length of boundary demarcated in miles.
* Fair cost rates. All rather lower than the rates of last season.
† Small and detached area.
‡ Town Survey.
§ Demarcation.

APPENDIX II.

Statement of sums expended for the year ending 30th September 1909.

District, &c.	Description of work.	Expenditure incurred during the year under report.			Total expenditure from inception to end of the year under report.			
		Actual (direct charges.)	Share of Director of Survey's pay and his office.	Total.	Actual (direct charges.)	Share of Director of Survey's pay and his office.	¼ per cent. charge for intervention.	Total.
1	2	3	4	5	6	7	8	9
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Shahabad	Traverse ...	46,943	8,741	54,184	57,502	9,145	499	67,146
Hazaribagh	Ditto ...	42,334	7,485	49,819	43,334	7,468	...	49,819
Manbhum	Ditto ...	5,090	1,430	9,520	31,538	5,580	1,720	38,119
Cuttack—Killa Bishanpur ...	Ditto ...	943	157	1,109	943	167	...	1,109
Khuna—Sundarbans	Ditto ...	1,408	248	1,653	1,16,764	8,884	6,261	1,30,309
Ditto ditto	Topo 3" ...	607	108	718	78,964	5,913	2,351	87,308
Ditto ditto	Topo 4" ...	40	8	48	2,457	218	104	2,780
Miscellaneous.								
Calcutta Suburbs Survey, including Revenue work and Panchanagram.	Cadastral ...	10,276	1,618	12,094	1,65,146	11,021	...	1,76,196
Ranchi (arrears)	Records	1,207	253	1,412	39,156	2,331	...	41,486
Patna ditto	Traverse	1,075	187	1,262	1,075	187	...	1,262
Monghyr—Town Khashmahal	Ditto ...	496	123	619	496	123	...	619
Purnea—Nepal boundary, Kosi river (Relaying boundary pillars).	Ditto ...	289	51	340	289	51	...	340
Purnea—Relaying boundary of Sobahi—Taizi No. 214, Pargana—Dharampur.	Ditto ...	324	57	381	324	57	...	381
Darbhanga—Relaying boundary of Raspur Patasta of Narhan Ward's Estate with Chaparsan Government Estates.	Ditto ...	339	51	390	396	106	26	1,029
Darjeeling—Nepal boundary relaying pillars on Mechi river.	Ditto ...	294	105	399	294	105	...	399
Shahabad—Taufir Bhodia relaying boundary.	Ditto ...	51	9	60	504	49	20	573
Sonthal Parganas—Relaying lost stations of mouza Bhangsan (Deoghar Town.)	Ditto ...	339	46	389	339	49	...	392
Monghyr—Relaying boundary of Sasdogra Taufir.	Ditto ...	631	114	745	631	114	...	745
Gaya—Relaying boundary between mouza Fulda and Rampur Handia, Pargana Narhat.	Ditto ...	295	40	335	326	40	...	365
Training class —assistant settlement officers.	.....	451	...	451	451	...	...	451
Revenue maps—reproduction and colouring.	Cadastral ...	1,060	135	1,195	1,060	155	...	1,215
Calcutta revision survey	Ditto ...	19,175	3,380	22,564	19,175	3,380	...	22,564
16" wall map	Ditto ...	1,056	208	1,264	1,056	208	...	1,264
Colouring suburban maps	Ditto ...	5,146	916	6,062	5,146	916	...	6,062
Calcutta maintenance scheme ...	Ditto ...	954	169	1,123	954	169	...	1,123
Salt Lake areas—Dhappa	Ditto ...	56	10	66	1,063	141	66	1,760
Fort Commissioner's land acquisition survey—Fair maps.	Ditto ...	784	138	922	1,555	236	...	1,791
Calcutta block plans for Collector ...	Ditto ...	321	...	321	1,373	...	...	1,373
Total ...	Traverse ...	1,04,096	18,312	1,22,318	2,53,328	23,956	6,816	2,91,886
	Cadastral ...	27,428	6,917	40,345	1,97,697	16,350	64	2,14,052
	Records ...	1,207	205	1,412	39,156	2,231	...	41,486
	Topo	647	114	761	80,421	6,131	2,455	90,057
	Standard maps ...	23,849	4,039	28,888	1,31,582	10,160	...	1,31,712
	Traverse charts ...	5,322	959	6,181	13,224	1,896	...	14,822
	Sadars	5,737	1,014	6,748	31,426	2,707	562	34,693
	Map Records ...	5,943	701	6,644	23,260	1,921	...	25,560
	Plains Maps ...	2,094	299	2,393	19,113	1,448	...	19,540
	Trijunction mark maps.	1,461	283	1,744	9,125	740	...	10,028
	Tahs mujmili maps of Parikud.	371	66	437	371	66	...	437
Bengal Drawing office	Reproduction for attestation.	8,269	978	9,247	21,204	1,707	...	22,911
	Reproduction for distribution and sale.	53,440	9,900	63,340	1,14,939	14,150	...	1,29,089
	Ganges Diara scheme.	353	62	415	35	63	...	415
	Index maps for Survey Annual Reports.	444	78	522	444	78	...	522
	Extra Departmental Work.	745	132	877	6,008	465	...	6,473
	Grand total ...	2,46,183	43,759	2,91,982	9,33,783	90,594	10,556	10,32,933

B. T. Crichton, Major, r.a.,
Director of Surveys, Bengal.

B. S. Press—8-12-1909—2750J—520—E. G.

REVENUE DEPARTMENT.

LAND REVENUE.

CALCUTTA, THE 3RD MARCH 1910.

RESOLUTION—No. 981 L.R.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1909, with the remarks of the Board of Revenue thereon.

The programmes of both the survey and settlement departments were almost fully carried out.

2. On the 31st January 1909, the Bengal survey department was removed from the control of the Surveyor-General of India and came under the direct control of the Local Government, Major Crichton being the first Director of Surveys. The connection with Eastern Bengal was finally severed in the following March. The consequent re-arrangements involved considerable care and attention and added appreciably to the work of the Director. As a result of the transfer of all cadastral surveys to the settlement department the work of the department now includes traverse surveys, the relaying of boundaries, special surveys like that of the town and suburbs of Calcutta, and the very important mapping work which is carried out in the Bengal Drawing Office. In addition, it is one of the functions of the Director of Surveys to inspect the cadastral work done by the settlement parties with the special object of ensuring a high standard of accuracy.

3. There was no topographical survey during the year under report. The outturn of traverse survey was 3,367 square miles as against 5,107 square miles in the previous year. The decrease was mainly due to the completion of the Sundarbans survey. The cost rates of this work per square mile were :—

DISTRICT.	1907-08.	1908-09.
	Rs.	Rs.
Shahabad	37·3	34·6
Manbhum	41·6	31·7
Hazaribagh	...	33·5

These rates are satisfactorily low; and the work appears to have been done promptly and efficiently.

The survey in progress in Calcutta has given considerable trouble to the Director much of which could have been obviated by the timely provision of funds by the Calcutta Corporation.

In the Drawing Office very considerable improvements have been made. The outturn of work is increasing, and the quality is believed to be high, and these results are being obtained with due regard to economy.

4. The work of the settlement department lay in 16 districts, and, excluding 1,629 square miles of revision survey in Orissa, the area cadastrally surveyed during the year was 3,378 square miles against 4,477 square miles in the previous year. Records were finally published in respect of 4,234 square miles as against 4,931 square miles in 1907-08. Excluding revision work in Orissa, 3,667 square miles were finished during the year; and the total area for which a record-of-rights has been completed in Bengal, under the supervision of the Director of Land Records, is now 47,674 square miles, the average annual outturn during the last 23 years being 2,073 square miles.

5. The areas dealt with by the settlement department fall mainly into the following classes :—

(1) Temporarily-settled estates, where a settlement of rents is necessary in addition to the record-of-rights.

(2) Permanently-settled estates in the Sonthal Parganas where, besides the preparation of a record-of-rights, the rent of every tenant must be settled. This necessity arises from the fact that the zamindars are debarred, by section 3 of the Sonthal Parganas Rent Regulation, II of 1886, from changing the rents payable by headmen or raiyats except through the agency of Government.

(3) Permanently-settled tracts, where the work consists of the preparation of a record-of-rights and the decision of all agrarian disputes. In these areas the settlement of fair rents is made only on the application of landlords or tenants.

(4) The temporarily-settled portion of Orissa, in which the revision of the last cadastral survey and record-of-rights is being made in order to bring them up to date with a view to continuous maintenance. Here the settlement of fair rents is made only on the application of landlords and tenants (the land revenue having been fixed at the last settlement for thirty years). In portions of this area the continuous maintenance of the records is being tried as an experiment.

6. *Settlement of rents.*—In the Jalamutha and Majnamutha temporarily-settled estates, comprising an area of 510 square miles with 195,845 tenants, rents have so far been proposed for nearly all the tenancies, but many objections are pending. During the year under report, the settlement rent-roll was confirmed in respect of 23,253 tenants, the average enhancement on the former rental being 15·86 per cent.

In the Sonthal Parganas a settlement of rents was made in an area of 827 square miles. The rates now settled are very moderate. The extension of cultivation amounts to 15 per cent. The total of the rents settled is about 30 per cent. higher than that of the previous settlement in which heavy rent abatements were granted temporarily. The number of illegal and objectionable transfers disclosed during the year was very small, only 665 out of 3½ lakhs of acres having been found to have been sold and 621 mortgaged.

The following table shows the results of rent settlements in the Bihar districts by compromise under section 109C, and by regular proceedings under section 105, of the Bengal Tenancy Act:—

District.	Under section 109C.			Under section 105.			
	Number of tenants.	Rent according to landlord.	Rent settled by compromise.	Number of tenants.	Former rental.	New rental.	Enhancement per cent.
		Rs.	Rs.		Rs.	Rs.	
Patna ...	4,314	59,035	58,767	...	...	...	...
South Monghyr	34,980	4,79,640	4,46,364	9,710	1,46,007	1,63,280	11·8
South Bhagalpur	...	...	...	2,849	46,520	52,536	12·9

The extensive resort to section 109C, which has considerably improved the strained relations previously existing between landlord and tenant, is very satisfactory. Of the enhancements allowed under section 105 in South Bhagalpur and South Monghyr one-half or more were due to excess area and the remainder to the rise in prices.

7. A very important feature of the operations in South Bihar is the commutation of produce rents under section 40 of the Tenancy Act. No less than 1,957 such cases were disposed of in South Bhagalpur in 1907-08. In South Monghyr nearly 6,000 cases have so far been filed, of which more than 3,000 are still pending. In the district of Patna the question of produce rents and their commutation is causing much agitation, and the applications are likely to be very numerous. During the year 2,545 were received, of which 258 were disposed of. It was found necessary to appoint a temporary additional settlement officer to hear the numerous appeals from the orders passed in commutation cases. It appears that the expenditure on these cases considerably exceeds the court-fee receipts, and it may become necessary to consider the question of raising the present court-fee of 8 annas per tenancy.

8. There was no settlement of fair rents during the year in any of the Chota Nagpur districts. In Ranchi disputes about the incidence of rent, prædial conditions and free labour were far more numerous and difficult than in previous years. Proceedings were taken to prepare a record of landlords' privileged lands in Ranchi under section 119 of the new Act. In the tracts taken up in Singhbhum and Manbhum the question of the rights of *ghatwals* is of great importance, and is receiving the very careful attention of the settlement officer.

9. The cadastral survey in Bihar and Chota Nagpur progresses satisfactorily. The Director of Surveys examined the village maps of both areas in the field and during recess, and found them fully up to the requisite standard. In Shahabad the cost rate of cadastral survey and initial record-writing for the area completed, including recess work, amounted to Rs. 203 per square mile as against Rs. 206 in Patna. The number of plots averaged 1,470 in Shahabad and 1,714 in Patna; while the subdivision of proprietary interests was minute in both districts. In fact, a case is reported from Patna in which the recorded share of a proprietor of a revenue paying estate represents 1-100th part of a square inch of land. In Manbhum the cost rate was Rs. 117-4 as compared with Rs. 105-3 in the previous year in the district of Singhbhum. The difference is accounted for by heavy initial expenditure, and a larger number of fields to the square mile, namely, 682 as against 394.

10. The progress of revision work in the districts of Cuttack and Balasore was more rapid than in the previous year, and the programme of the year was exceeded. The changes were numerous, and the raiyats, as usual, showed a keen interest in the proceedings, while the landlords displayed more appreciation than in previous years. Fair rents were settled under section 105 of the Bengal Tenancy Act mainly on applications filed by tenants in respect of new reclamation. On this ground the rents of 3,984 tenants in the district of Balasore were raised from Rs. 7,013 to Rs. 12,157, or by 77 per cent.

11. Experimental maintenance of the record, without legislation, was carried out in the sadar subdivision of Balasore, with an area of 965 square miles. It appears to have been received favourably by tenants and landlords alike. The work was, however, found more difficult than had been anticipated, and the proceedings proved that, in order to merit the presumption of accuracy, the records should be scrutinized much more elaborately than had been contemplated, and at a very considerable addition to the cost rate.

12. The utilization of cadastral maps and records-of-rights by courts and executive officers, has been rapidly extending. The present report makes it clear that they are now in much more general use.

13. The maintenance of records in Sambalpur went on satisfactorily, while the working of the offices for the registration of mutations at Bettiah, Hajipur and Mahnar continued to prove the futility of the voluntary system aimed at by the passing of the Land Records Maintenance Act of 1895. There was some slight improvement in the record of mutations and the inspection of rent-rolls in Government and Wards' estates, but there is still much room for improvement, especially in the latter class. The inspection and maintenance of boundary marks received more attention than in previous years.

14. The Lieutenant-Governor observes with satisfaction that the great majority of the officers employed on survey and settlement did their duty with zeal and industry. His acknowledgments are due in particular to Messrs. Murphy, Reid, Allanson and Taylor who held charge of the most important operations. The survey department was controlled by Major R. T. Crichton, C.I.E., and the settlement department by Mr. H. McPherson, I.C.S. The Lieutenant-Governor's thanks are due to these officers for the smoothness and efficiency with which the work of each department was carried out.

ORDER.—Ordered that this Resolution be published in the *Calcutta Gazette*, and that copies of it, with copies of the two reports and the Board's note, be submitted to the Government of India.

By order of the Lieutenant-Governor of Bengal,

F. W. DUKE,

Chief Secretary to the Govt. of Bengal.

No. 982 L.R.

COPY, with copies of the two reports, forwarded to the Surveyor-General of India for information.

No. 983 L.R.

COPY, with a copy of the Survey Report, forwarded to the Municipal Department of this Government for information.

No. 984 L.R.

COPY, with a copy of the Settlement Report, forwarded to the Appointment Department of this Government for information, with special reference to paragraph 14 of the Resolution.

By order of the Lieutenant-Governor of Bengal,

H. T. CULLIS,

Offg, Under-Secretary to the Govt. of Bengal.

CALCUTTA,
The 3rd March 1910.

B S, Press—5-3-1910—5806O—620—T, N. E.

ANNUAL REPORTS



ON

SURVEY AND SETTLEMENT OPERATIONS

BY THE

DIRECTOR OF LAND RECORDS, BENGAL,

AND THE

DIRECTOR OF SURVEYS, BENGAL,

FOR THE

Year ending 30th September 1910.



CALCUTTA:
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REPORT

OF THE

DIRECTOR OF LAND RECORDS, BENGAL.

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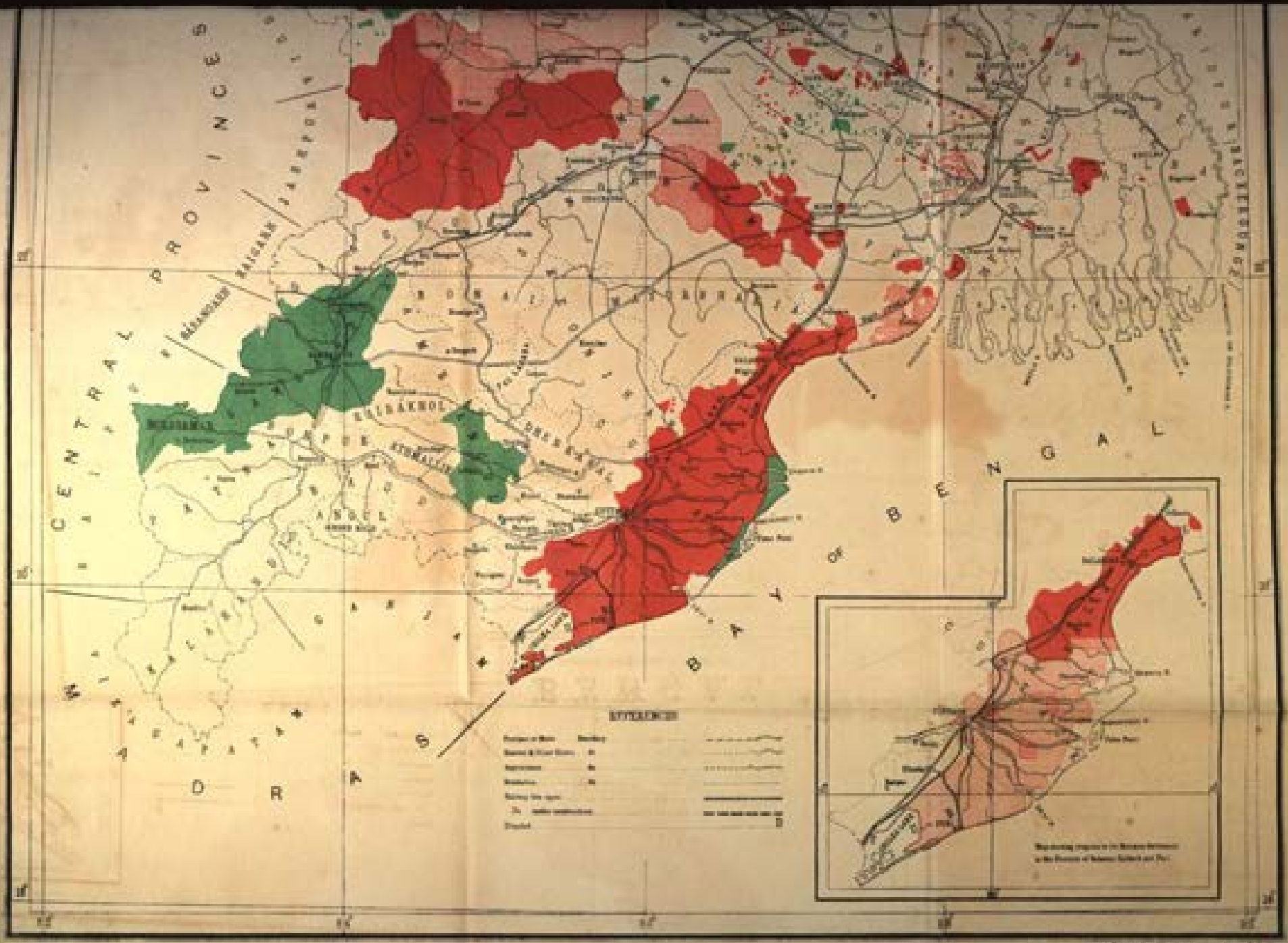
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SETTLEMENT MAP




CENTRAL PROVINCES
BAY OF BENGAL
DRAS

DEPARTMENT OF LAND RECORDS, BENGAL.

No. 5454.

FROM H. McPHERSON, Esq., I.C.S.,
Director of the Department of Land Records, Bengal,

TO THE SECRETARY TO THE BOARD OF REVENUE, L. P.,
LAND REVENUE DEPARTMENT.

Dated Calcutta, the 12th December 1910.

SIR,

I HAVE the honour to submit the following Report on the Survey and Settlement operations conducted under the supervision of this Department during the year ending the 30th September 1910.

CHAPTER I.

GENERAL SUMMARY AND GENERAL REMARKS.

Extent of the year's operations.

2. Survey and Settlement operations were in progress during the year in 17 districts of the Province. The area cadastrally surveyed during the year, including 1,579 square miles of revision survey in Orissa, was 5,053 square miles. Preliminary records were written for the same area. Records were prepared for attestation in 5,057 square miles, attested in 4,152 square miles and finally published in 4,302 square miles. The rents of 1,63,195 tenants were settled. The expenditure of the year amounted to Rs. 15,14,037.

Total area settled in the Province up to 30th September 1910.

3. The total area for which a record-of-rights has now been completed under the control of the Department is 51,392 square miles. Of this, 3,718 square miles (excluding Orissa revision work) were completed during the year under report. Progress during the last twenty-four years has averaged 2,141 square miles a year.

Future programme.

4. The proposals which in the previous year were submitted to the Board (*a*) for the extension of revision operations to North Bihar, (*b*) for the reduction of the Bihar party, (*c*) for the starting of a new Bengal party and (*d*) for an increase in the allotment of Gazetted officers to settlement work, have been approved by the Local Government and forwarded to the Government of India for sanction. Effect has already been given to proposals (*a*) and (*b*). The extension of settlement operations to the unsurveyed portions of the Midnapore district has been sanctioned by the Government of India, and the traverse survey of the first year's programme has already been taken in hand.

Settlement staff.

5. The largest number of Settlement and Assistant Settlement Officers employed during the field season was 8 and 126, against 8 and 135 of the preceding season. The required number of Gazetted Officers not being available, the system of employing competent outsiders had to be continued. The proposals of the Local Government for an increase in the cadres of the Provincial and

Subordinate Executive Services to meet the requirements of settlement work have been submitted to the Government of India but orders have not yet been received.

6. Out of 20 proposals for alteration of police jurisdictions received during the year, 16 involved changes in thanas and 4 in police outposts. A larger use is evidently made of village lists and maps by local officers in formulating their proposals, for on examination they were in most cases found to be complete. During the year 13 notifications affecting the jurisdictions of 43 thanas were issued by Government. The necessary correction slips have been prepared and issued by my office. Thana maps showing roads, rest-houses and thana head-quarters have been received from two Collectors out of the three from whom they were due at the end of last year. The marking up of one set of thana maps has been completed and some progress has been made with a second set.

Maintenance of Jurisdiction lists and maps.

7. Under the orders which limit survey and settlement training to officers who have not done more than two years' service, eight officers were deputed last year for training to the settlement camps: Messrs. Drake, Makeig-Jones, Boyce, Drummond, Maitland and De to Bihar, and Messrs. Cassell and Laurie to Chota Nagpur. I was satisfied from the reports of the two Settlement Officers at the end of the course that all the junior civilians had derived considerable advantage from the training, which besides explaining to them the technicalities of survey and record writing, brought them into touch with agrarian life and showed them the bearing of settlement work on the relations of land-lord and tenant.

Training of Junior Civilians.

8. Six Munsifs deputed in the previous year, together with the six recruits deputed last year, worked as Assistant Settlement Officers during the year, eight in Bihar and four in Chota Nagpur. They received a thorough training in all branches of Survey and Settlement work. Although some of these officers did excellent work, the general average was below the high standard of previous years. The quality of the officers deputed must of necessity vary from year to year, and I am glad to say that the latest recruits give promise of a return to the previous standard.

Training of Munsifs.

9. During the year seven district kanungos were deputed to the Bihar Settlement for training in survey and settlement. Six of them completed their training and were certified to be competent.

Training of district kanungos.

10. There is under contemplation an important amendment of the Tenancy Rules, which will permit of the draft-publication of the settlement records in attestation camps. This system was tried experimentally last year in all the major settlements, and was welcomed both by landlords and tenants. A modification of the final publication rules is also under consideration. The proposed amendments of the rules have been published under section 190 of the Bengal Tenancy Act.

Settlement Rules.

11. In last year's report I mentioned that Mr. S. L. Maddox, I.C.S., had been placed on special duty to study the agrarian law of Orissa and to draft, if necessary, a new Tenancy Bill for that Division. Mr. Maddox also enquired into the question of annual maintenance. The result of his labours has been considered by the Local Government, and proposals for legislation on the lines suggested by Mr. Maddox have been submitted to the Government of India.

Agrarian legislation for Orissa.

12. A most important event of the year was the extension of the Chota Nagpur Tenancy Act, VI of 1908, to the district of Manbhum. The areas immediately concerned were Pargaaas Barabhbhum and Patkum, which are still under settlement. The local officers were unanimously of opinion that the provisions of the Chota Nagpur Tenancy Act were more suited to the requirements of the district than the provisions of the Bengal Tenancy Act, and should be substituted for the obsolete Act X of 1859. The local zamindars and pleaders were consulted and could advance no reasonable objection to the extension of the Chota Nagpur Act. The Division has

Extension of Chota Nagpur Tenancy Act to Manbhum District.

thus secured the advantage of being governed by one uniform law of landlord and tenant.

Utilization of Land Records.

13. There is little to add to the remarks recorded under this head in Chapter V of last year's report. The following extract from the Collector of Bhagalpur's administration report is a typical specimen of the tribute that has been borne to the usefulness of the settlement records in districts that have been fully surveyed and settled:—

"These records are as a matter of course utilised by Civil Courts in suits for arrears of rent and possession, and by commutation officers deciding cases under section 40 of the Bengal Tenancy Act. Enquiries show that the Criminal Courts at Headquarters and at Sub-Divisions have found the *khatians* of tenants and proprietors a great help in deciding the truth of cases during the first examination of complaints, and of those falling under section 145 of the Criminal Procedure Code and various other sections of the Indian Penal Code where possession of land has been claimed by parties.

"They have been used in land acquisition cases, and steps are now being taken to get the Engineer's plans drawn on a tracing of the Cadastral map, wherever possible, and the survey numbers referred to in the Amin's *khasra*. The rental and other particulars are deduced from the settlement records. They have proved invaluable during the present cess re-valuation proceedings and the agricultural loans operations, where the applicants have had to produce their *khatians* as a test of their statement that they were occupants of the land for which the loans were applied for. The Chaukidari Unions have been organised on the thana *mujmili* maps, and this forms the basis of the present census operations. In the Sub-Registrar's office the description of lands by means of survey numbers is insisted upon.

"The tendency to use these records generally, whenever their utility is apparent, is on the increase."

CHAPTER II.

[*See* Appendices I to VI.]

SETTLEMENT OF LAND REVENUE.

Estates in Midnapore.

Area, 1,069 square miles, villages, 3,105, tenants, 2,57,345.

14. *Area.*—Details of the area are shown below:—

	Area in square miles.	Number of villages.	Number of tenants.
Government estates ...	91·26	141	195,345
Temporarily-settled estates	509·96	1,504	
Zamindari estates* ...	468·21	1,460	61,500
Total ...	1,069·43	3,105	2,57,345

15. *Staff.*—Babu Rampada Chatarji, Deputy Collector, was in charge of the operations. He was assisted throughout the year by two Sub-Deputy Collectors and for portions of the year by four outsider Assistant Settlement Officers.

16. *Programme.*—The chief items in the programme were the preparation of rate-reports and completion of land revenue settlement in six temporarily-settled estates, the disposal of case work and the fair copying and final publication of records for 387 square miles of Government and temporarily-settled estates and for 71 square miles of zamindari estates. The recovery of costs in the zamindari estates and the classification of papers and consignment of records to the record-room in the case of completed areas also formed an important part of the programme.

17. *Work done.*—The rate-reports were submitted and the programme of land revenue settlement was fully carried out. Great progress was made in the disposal of case-work and the results of appeals are extremely satisfactory. Final publication was completed in the zamindari estates and nearly completed

* Dealt with in this Chapter for convenience.

in the Government and temporarily-settled estates. The work of recovery of costs has been completed in the Nayabasan and Rohini estates and only remains to be done in the Jhargram estate. The classification of papers and consignment of records also made good progress. It is expected that the remaining work of settlement will be completed during the present month.

ESTATES IN HOOGHLY.

Area, 39·82 square miles; villages, 155.

18. The area comprises Government, temporarily-settled and zamindari estates scattered over several thanas of the district. The work in these estates was in various stages of progress at the beginning of the year when the operations were transferred to my control. Babu Mahendra Nath Gupta, Deputy Collector, held charge of the settlement and had under him two outsider Assistant Settlement Officers for eight and three months respectively.

19. The programme consisted of the survey and khanapuri of 3·24 square miles; the recess work of 8·65 square miles; the attestation of 21 square miles; the draft and final publication of 22 and 8 square miles respectively; and the disposal of case work. The survey and khanapuri programme was carried out and the recess and attestation programme nearly completed. Though the area is small, there were no less than 3,338 internal disputes, most of which referred to rent-free and fixed-rent claims and to estate boundaries and were very keenly contested. In Chinsura town khas mahal some difficult questions which have arisen regarding status and rents are under consideration. Considerable use was made of section 109C in effecting fair rent settlements by amicable compromise. More than 400 tenancies were thus dealt with and an existing rental of Rs. 6,265 enhanced to Rs. 7,107 chiefly on the ground of rise in prices.

20. Generally speaking, the work in this district presented exceptional difficulties: the parties concerned in the disputes were mostly educated people accustomed to litigation and the disputes were of a complicated nature which often entailed the examination of a mass of documentary evidence and involved legal points of some nicety.

SAMBALPUR MAHAL OF SAMBALPUR DISTRICT.

Area, 2 square miles; tenants, 331; plots, 2,163.

21. *Completion of operations.*—This small settlement was concluded and the final report was submitted by the Deputy Commissioner, Mr. Moberly, I.C.S., before the close of the year.

CHAPTER III.

[*See* Appendices I to VI.]

PERMANENTLY-SETTLED ESTATES.

SONTHAL VILLAGES IN RAMPUR HÂT (BIRBHUM).

Area, 132 square miles; villages, 105; plots, 148,508.

22. For some years past there has been persistent discontent amongst the Sonthals of the Birbhum and Midnapore districts, and they have petitioned Government from time to time against their landlords and money-lenders who are alleged to have illegally enhanced their rents and taken away their lands. At one time some agrarian disturbance was apprehended in the Rampur Hât subdivision of Birbhum where the agitation had been most noticeable. In 1908 a special enquiry was conducted by Mr. McAlpin, I.C.S., and in his report submitted in 1909 he strongly recommended the inception of survey and settlement operations in Rampur Hât, and the undertaking of legislation to prevent the alienation of their lands by aborigines. On a consideration of his report,

the Local Government applied to the Government of India for sanction to the inception of survey and settlement operations in the affected area, and sanction was accorded in the Government of India's No. 1351-483-2, dated the 10th December 1909. The expectation is that the true facts of the situation will be fully elicited by the settlement, and that, in the light of these facts, it will be possible to consider adequately whether there is any real necessity for legislation.

23. The operations were started in the beginning of 1910 under the supervision of Mr. P. M. Robertson, an officer who had worked for many years in the settlement of the Sonthal Parganas which adjoins Birbhum. They cover an area of 132 square miles, comprising 105 villages divided into 2 compact blocks of 24 square miles and 108 square miles respectively. The work has been treated as an advance portion of the district settlement which, according to the existing settlement programme of the Province, will be taken up in 1916-17. Immediately after publication of the survey and settlement notifications in the end of December 1909, traverse work was started by the Director of Surveys, and the traverse plots were supplied to the Settlement Officer with as much expedition as possible. The Settlement Officer was able to start cadastral survey and draft record-writing early in February, but it was the last week of July 1910 before field work was completed. The climatic conditions under which the work had perforce to be conducted were extremely trying and it is greatly to the credit of Mr. Robertson and his two assistants, Babu Baidya Nath Ray (Assistant Settlement Officer) and Maulvi Ekramuddin, Kanungo, that the programme was successfully carried out. The work of khanapuri was done on the lines followed in Bengal Tenancy Act Settlements, with two important additions which are thus described by Mr. Robertson:—

"(a) In every manza, a village list was prepared, as in the Sonthal Parganas. The landlord's jamabandi was taken as the basis, and the history of each jote (holding) was traced and recorded with the names of the present holders. For this purpose, the landlords were called on to furnish the oldest jamabandis they had. Where there had been a settlement, the old jamabandis were taken as the basis. These village lists will be very useful in ascertaining the indebtedness of the Sonthals and the extent to which they have lost their lands. (b) The lands were classified into four classes of dhanî and two classes of non-dhani, as in the Sonthal Parganas. For this purpose, the Sonthal Parganas khasra was used with the necessary modifications. All the above were sanctioned by the Director of Land Records, Bengal, when I met him at Dumka on the 12th January 1910. Further, a list has been prepared showing the history of each *chak* since Babu Bhuban Mohan's Settlement in 1881-83, with the number of Sonthal and non-Sonthal raiyats in each. This will give a fair idea of the proportion of Sonthal raiyats in the area under settlement."

Internal disputes averaged 43 to the square mile. Mr. Robertson notes that at first there was a disposition amongst the Sonthals to believe that they were going to have all the lands lost by them in the past restored, but this vain hope gradually disappeared, and the attitude with which the operations were eventually regarded has been thus summed up:—

"The two Sonthal leaders, Durga Manjhi and Braja Manjhi mentioned by Mr McAlpin, met me while I was in camp at Kastogorha in the south. They took up a very reasonable attitude, and seemed to thoroughly understand that it was impossible to undo all that has gone before, and to restore all their lands to the Sonthals. They only wanted protection in the future, and filed a petition signed by over 100 Sonthal Manjhis and *ex*-Manjhis, praying that:—

(1) A Manjhi be appointed in every Sonthal village.
(2) That the protective laws in force in the Sonthal Parganas be introduced into the Sonthal villages in Birbhum.

I assured them that these matters would receive due attention at the proper time."

24. *Recess work.*—In spite of the late field season, Mr. Robertson was able to complete the bulk of the cadastral recess work before the close of the year, and the balance which was then pending has been finished off in time to admit of the opening of the attestation camps by the usual date.

Mokimpur Estate in Jessore.

Area, 26·86 square miles; villages, 20; plots, 35,437.

25. *Inception of operations.*—Owing to the unsatisfactory state of its rent-roll, the Mokimpur Ward's Estate, a compact block of 27 square miles, situated

in the easternmost part of the Jessore district, was brought under survey and settlement by Government Notification No. 1882T.—R., dated the 13th September 1909. The estate is the property of the Jaunbazar Ward. The work was placed under my charge by the Board.

26. *Staff.*—Babu Akshay Kumar Mukharji, who has recently been promoted to be a Sub-Deputy Collector, was in charge of the operations under the supervision of the Collector.

27. *Programme and progress.*—The programme was to complete the traverse and cadastral survey as well as the khanapuri and recess work of the whole area. It was successfully carried out in spite of the fact that the traverse and cadastral surveys were undertaken in the same season. The khanapuri work turned out to be easier than originally anticipated. In this area there is none of the complicated subinfeudation that was found in Dihi Bhadra of the adjoining Khulna district and the number of internal disputes was remarkably small. There were 19 boundary disputes in which the orders of the Settlement Officer appear to have been accepted, as no appeals have been filed. The cadastral recess work was completed at Ranchi under the supervision of the Settlement Officer of Chota Nagpur, as satisfactory arrangements could not be made for it locally.

BIHAR SETTLEMENT.

28. *Staff and extent of operations.*—Mr. J. A. Hubback, I.C.S., was Settlement Officer from 1st to 17th October, when Mr. P. W. Murphy, I.C.S., returned from special duty in connection with the writing of the final reports of Bhagalpur and South Monghyr and held charge till he went on leave on the 29th April. Mr. Hubback was again Settlement Officer for the rest of the year. During his incumbency as Assistant Settlement Officer, he was in subordinate charge of ten cadastral khanapuri camps in Shahabad. The other covenanted Assistant Settlement Officers were Mr. J. F. W. James, I.C.S., (Patna) and Mr. C. L. Philip, I.C.S. (Shahabad), who held charge of attestation camps during the field season and of the vernacular office during recess. The number of Assistant Settlement Officers, other than covenanted officers, varied from 48 in the field season to 38 in the recess.

South Bhagalpur.

1,632 square miles, 2,563 villages; 150,732 tenants; 1,267,098 plots.

29. The operations were practically completed during the year. The work of recovery of costs which was postponed in the preceding year owing to failure of crops, was successfully carried out, and only a balance of Rs. 17,809, out of a total of nearly 3½ lakhs of rupees, remained uncollected at the end of the year. This was due mostly from a few big landlords and has since been recovered in part.

30. A large amount of commutation work has been done under section 40 of the Bengal Tenancy Act and a pending balance of case work under sections 105 and 106 cleared off. The results of settlement appeals to the Board of Revenue and the Special Judge have been creditable to the officers concerned.

South Monghyr.

2,284 square miles; 2,352 villages; 302,468 tenants; 2,103,628 plots.

31. *Programme.*—The work that remained to complete this district consisted of office work and final publication of the records of the area left over from the previous season; the attestation, draft publication, disposal of objections, office work and final publication of the records of Bishunpur taluk, the work of Babu Sukan Singh's villages proposed to be taken up under section 112, the settlement of fair rents in the Government estate Taufir Barhia, case work, and the computation and recovery of costs for the whole of South Monghyr. The programme was carried out except in respect of Babu

Sukan Singh's villages which could not be taken up till the orders of the Government of India were received.

32. *Rent settlement.*—The fair rent settlement in the Bishunpur taluk of the Khaira Raj on a compromise which allowed a reduction of 4 annas in the rupee on the nominal rent-roll, was the last portion of the application to the district of the provisions of section 109C. In all 19,437 tenants out of 162,549, or 12 per cent. of the whole, have had their rents settled under that section in South Monghyr and it is matter for congratulation to the framers of the Amendment Act of 1907 that the new section should have been worked so successfully in the first district to which it was applied.

Taufir Barhia was the only Government estate in which it was considered desirable to settle rents under section 104. It was an estate in which the previous rent settlement done 15 years ago under the unamended Bengal Tenancy Act had led to very serious difficulties. Of the present operations Mr. Hubback writes as follows:—

Babu Suresh Chandra Chakravartty, who was placed in charge of the settlement of fair rents, proceeded on the grounds of rise in prices and increase in productiveness due to fluvial action. The tract is *tal* land, submerged yearly by the floods of the Ganges and gains every year a rich deposit of silt. Although his justification for enhancement was based on these two grounds, in effect he proceeded under section 104A (1) (*b*), proposing rents which he considered to be fair. These rents were accepted by the tenants and by the Collector as landlord. The enhancement is over 52 per cent. on the last rental, but even now the rents of this estate are low in comparison with the rents of adjoining estates, and the tenants with little effort beyond scattering the seed and reaping the crop can make a handsome profit.

33. *Case work.*—A very large amount of case work under sections 105, 106 and section 40 was disposed of during the year. 2,905 tenancies were dealt with under section 105, existing rents being enhanced on an average by 9 per cent. 285 section 106 cases were disposed of. Many of the pending cases under this section await the decision of the test 'dahiak' cases referred to in the Patna report.

The most important portion of the case work was the commutation of produce rents under section 40, which was done on an unprecedentedly large scale. Of this work Mr. Hubback writes:—

No less than 6,374 new applications under section 40 for commutation of produce rents were received during the year. 6,808 were disposed of, but the balance left undisposed of is still 2,696. Of the cases disposed of up to date in this year, in 6,223 commutation has been allowed and 585 disallowed. 76 appeals dealing with 364 tenancies still remain. In 62 appeals the lower Court's judgment was upheld, which shows that, on the whole, the work was good. In most cases the trying officers made thorough investigations and wrote full and careful judgments, but occasionally certain officers depended too much on their own preconceived ideas of probable outturn of crops.

34. *Recovery of costs.*—Of the total demand Rs. 5,50,818, Rs. 4,64,335 has been collected. The balance is practically all due from large landlords and wards of Court to whom special concessions have been allowed. The balance of the occupier's share as well as some part of the landlord's share will be collected early in the coming field season by a recovery officer, while the rest will be paid in instalments by the landlords.

Patna District.

1,956 square miles; 2,507 villages; 1,951,936 tenancies; 3,412,215 plots.

35. The programme included attestation, draft publication, disposal of objections under section 103A, and settlement recess work in an area of 1,133 square miles, covering the whole of the Sadar, Dinapore and Patna subdivisions with thanas Fatua, Hilsa and Islampur, together with the disposal of case work under sections 40, 105 and 106 in respect of the area attested in the previous year. A large volume of office work on the records of this area had also to be completed. A considerable arrear of settlement recess work had to be overtaken in respect of the previous season's area, and the disposal of sections 40, 105 and 106 cases for the same area was also taken up. The programme was completed except that an arrear of recess work, corresponding to the previous year's arrear, remains to be wiped off. With the diminution in the number of plots covered by the cadastral programmes of the last two

years, the arrear of the settlement recess section should quickly disappear. The difficulty has been to obtain a sufficient number of competent hands.

36. *Attestation.*—The determination of produce rents was, as in the previous year, the chief difficulty of attestation. The difference in this respect between the easterly thanas of the district and the western thana of Bikram, has thus been commented on by the Settlement Officer :—

In thanas Hilsa, Islampur and Musaurhi the principal difficulties were as in last season in connection with attestation of produce rents. In these thanas some difficulty was experienced in obtaining old papers which were necessary for ascertaining details of abwabs, and in Hilsa and Islampur such papers were found in only 23 per cent. of the cases in which landlords claimed more than half. In no case, however, when old papers were found did they fail to show the excess over half as abwabs. In Bikram thana abwabs were less common and when they did exist no attempt was generally made to conceal them. The landlord's share is here much lower than in the east of the district, being generally one-half of the produce, without abwabs, calculated after allowing a *mafi* of five or seven seers, so that the landlords take only 16½ or 17½ seers in the maund.

In the whole district there have been nearly 160,000 produce-rent khatians. A landlord's share larger than one-half has been attested in about one-sixth of these, but the legality of the contribution called '*dahiak*' which has throughout been treated as an abwab or illegal demand by the Settlement Department has been maintained in certain test cases under section 106 which are pending before Mr. James. It is probable that the cases will be carried eventually to the High Court and that we shall get in the end an authoritative decision on the point. Should '*dahiak*' prove to be a legal demand, forming part of the rent, it will affect about 50,000 khatians. Details of its actual payment have been recorded in the special produce-rent khatian. The Courts will thus find no difficulty in giving effect to the final decision of the dispute, whatever it may be.

37. *Subdivision of proprietary rights.*—Small tauzis subdivided into minute shares increased the work of khewat-writing. The peasant proprietor flourishes in Patna district. Sometimes absurdly minute fractions were encountered, *e.g.*, a one eight-millionth share in a rental of Rs. 1,197.

38. *Rent receipts.*—Much of the difficulty that is experienced in determining the status and rent of raiyats in South Bihar is due to the wrongful and fraudulent omission of landlords to grant proper rent receipts to their tenants. An attempt was made in the previous year to enforce the penal provisions of section 58, Bengal Tenancy Act, against offenders, and the section was again utilized last year. Patna proprietors appear to be hardened sinners in the matter and in order that the practice may not be lost sight of by the Civil and Revenue Courts, after the Settlement Department has left the district, I would transcribe below the remarks of the Settlement Officer on the subject :—

Thirty-one reports were made to the Collector by the Settlement Officer against landlords who failed to give receipts in proper form. Fines were imposed in every case amounting in the aggregate to Rs. 567. The Munsif of the Third Court, Patna, reported one case, on which no action was taken: otherwise no report was made to the Collector during the year except by the Settlement Department.

It might have been expected that the result of last year's comparative activity in this matter would be that many landlords would prepare and preserve counterfoils in proper form without issuing the receipts to their raiyats. One case of this nature was detected. The landlord had been fined last year: he was reported again and fined Rs. 15. In another case Maulvi Amanat Hossain, Assistant Settlement Officer, caught a patwari in the act of destroying the blank raiyat's portion of his receipt book, counterfoils having been duly filled in. There was a case from Camp XIV in which a landlord who had been fined last year was issuing receipts complete in everything but signature. He was reported again and fined Rs. 5 for the omission, which was probably not accidental.

Receipts in proper form are practically never issued in Patna. Where counterfoils are kept for production in Civil Courts receipts are not issued to the raiyats. A case worthy of note occurred in Camp X, where a patwari filed counterfoils of receipt purporting to have been issued in 1903 in a book bearing date of printing 1906. He was prosecuted for fabricating false evidence and convicted by the Subdivisional Magistrate of Dinapore.

39. *Commutation of produce rents.*—A large volume of commutation work under section 40 of the Bengal Tenancy Act was undertaken during recess. 2,505 applications were disposed of. Cash rents amounting to Rs. 69,317 and covering 7,546 acres were settled in the 1,632 cases in which commutation was allowed.

40. *Cost of settlement.*—Proposals for the apportionment of costs were submitted to Government and Government has sanctioned a cost rate of 10 annas per acre. Of this 5½ annas will be realized from landlords and 4½ annas from raiyats. Recovery will start in the present cold weather.

Shahabad District.

4,373 square miles.

Survey.

41. *Programme.*—The programme consisted of the cadastral survey and khanapuri of 1,504 square miles in thanas Shahpur, Piru, Bikramganj, Dumraon and Buxar, and the completion of the maps and records of this area for attestation. In addition, 33 square miles of Ganges diara had to be topographically surveyed. The whole of the programme was carried out.

42. *Survey.*—The greater part of the cadastral survey was completed by the middle of January The total number of plots khanapuried was 1,849,931 averaging 1,230 to the square mile. The personal and independent check of survey amounted to 4·27 linear miles per square mile and was well above the standard, while 16·38 per cent. of the plots were checked at khanapuri.

The topographical survey of the Ganges bed up to the Ballia high bank was carried out according to the principles laid down in the Settlement Manual. In some places it was found that the distance between the two high banks was as much as eight miles. The survey of the Sone diara was carried up to the permanent stations on the Gaya high bank. The urban areas of Buxar, Dumraon and Jagadispur Municipalities were surveyed in block.

Boundary disputes were much below the normal average for Bihar. Considerable areas belong to the Dumraon Raj, and, though that estate filed disputes in every case where the estate touched the property of other landlords, very few disputes were filed between villages of the Raj. The most difficult boundary disputes were those that related to diara areas.

43. *Khanapuri.*—Internal disputes were comparatively simple and averaged 40 per square mile. Although a considerable area is still under produce rent, no disputes of importance have so far been raised regarding either the system of rent or the share of the landlord. A general claim by the Dumraon Raj to half rights in timber trees on the cash-paying holdings swelled the number of disputes. A large number of rent-free claims was put forward by tenants of the same estate and resisted by the Raj.

Settlement.

44. *Programme.*—The programme consisted of the attestation, draft publication, and disposal of objections under section 103A in the area of 333 square miles in thana Arrah which had been cadastrally surveyed and khanapuried in the previous year. An additional area of 6 square miles was surveyed and khanapuried, and its records completed up to the stage of disposal of objections under section 103A.

45. *Attestation.*—The bulk of the attestation work was finished by the end of March. Disputes relating to possession and title were very numerous and keenly contested, the parties being frequently armed with conflicting Civil Court decrees. Produce rents were found in 31 villages only and gave no trouble. *Nèq* was the only *abwab* found, this being simply a contribution to the patwari's pay. The attestation of cash rents gave little trouble. There had not been much illegal enhancement of a general nature and there were few cases where rents were generally disputed in a village, though every village provided a number of special and particular disputes about the rate of rent.

46. *Guzashtadars and settled raiyats.*—The most important and difficult question dealt with was that of the status of the raiyats known as *guzashtadars*.

The difficulty was that in some portions of the district the word *guzashtadar* is synonymous with raiyat at a fixed rent or rate of rent, while in other places the *guzashta* right is merely an occupancy right. After the area, in which the fuller significance of the term applied, had been roughly determined, a circular was issued instructing the attestation officers concerned to record true *guzashtadars* within that area as raiyats at fixed rates of rent. The action of the attestation officers was accepted by some landlords but disputed by others. Most of the opposition came from the Dumraon Raj. In the course of the field season I made a further examination of the question, the result of which was to establish that within certain areas the *guzashta* right was a right to hold at fixed rates, and I directed that in each case a full record should be made of the evidence on which the attestation officer relied in deciding whether the *guzashta* right was a right to hold at fixed rates or merely an occupancy right. As a result of some references to the subject in the Press, the original circular which had issued prior to my investigation of the case was questioned in Council and the public was informed that it had been withdrawn, that a modified circular had issued and that a further opportunity would be afforded to landlords of objecting, under section 103A, to any entries of fixed right status that might have been made to their prejudice under the terms of the original circular. The prevalence of the *guzashta* status in Shahabad may be gathered from the fact that nearly 50,000 raiyats out of the total of 104,000 have been recorded as holding at fixed rates. Objections have been filed in 3,239 cases only. Mr. Hubback, I.C.S., Settlement Officer of Shahabad, sums up the cases as follows:—

> The fact of the matter is that rents in Shahabad are on a totally different plane from those found in any other district in Bihar. The raiyats are as a body more powerful than their maliks, and it is practically impossible for a malik to get any enhancement of his rent, except when holdings change hands. Add to this the fact that the larger landlords who hold land both north and south of the railway have not had much incentive to increase the rates of rent because their total rent-roll has increased enormously in the last 50 years through the opening up of the district subsequent to the Mutiny, and the establishment of a very complete irrigation system throughout the district. Further, we must consider the effect on the district as a whole of the practice of the Dumraon Raj, which owns a very considerable proportion of the total cultivated area. As far as present information goes, it appears that the Raj has never increased the rate of cash rents; and even when holdings were transferred for any reason from one raiyat to another the rent remained unaltered, a certain sum in addition to the first year's rent being taken as *nazrana*. It is premature to speak generally of the whole of Shahabad district, but it is certainly the experience of the officers who have made detailed enquiries into rent questions in the course of attestation as well as of those who have made more cursory enquiries during preliminary record-writing, that rates of cash rent once determined appear to have a certain sanctity, which is respected by the majority of landlords and fiercely defended by the raiyats wherever assailed. There are even indications that this sanctity attaches to cash rents substituted by mutual agreement for produce rents, but it is obvious that tenancies of this nature cannot be regarded as tenancies at fixed rates of rent, except when there is clear evidence of contract to this effect. For there is definite evidence that such tenancies have not existed as cash paying tenancies since the permanent settlement. But the northern area has always been cash rent paying; it has been under full cultivation for many hundreds of years; and there is little doubt but that there the majority of the holdings have continued at rates of rent which have remained unchanged for a very long period.

Practically, the whole of the non-*guzashtadars* have been recorded as settled raiyats, the number of non-occupancy holdings being only ·1 per cent. of the total. Land has become very valuable in Shahabad. The Settlement Officer's figures show that the price of proprietary rights during the past 50 years has averaged more than 60 times the land revenue involved, while raiyati holdings have sold at an average of Rs. 313 per acre and been mortgaged at an average of Rs. 170 per acre. He adds "there is considerable difference between the price of mortgage and that of sales of raiyati land; but a mortgage practically amounts to a sale as it is seldom redeemed, though the raiyat consents to a lower rate because he is firmly convinced that he can redeem it. The very high price paid indicates the strength of the desire for land and also the lowness of the rent payable; and it is further indicative of the idea that rents are fixed. The fact that more than one-tenth of the raiyati area is mortgaged, shows clearly the indebtedness of the raiyats of Arrah thana. This is due, firstly, to the unthriftiness of the predominating class of Rajputs and secondly, to their desire to remain on the land as long as

they can, even after the family has grown too large to be supported by the holding."

47. *Objection and recess work.*—The progress of section 103A work was delayed by the status difficulty above described. No recess work was done on the records of thana Arrah owing to lack of competent men, all available hands having been put on to complete the records of Monghyr and Patna. It will be taken up this cold weather.

SONTHAL PARGANAS.

Zamindari Estates (Third Programme).

1,590·47 square miles; 2,890 villages; 99,076 tenants; 1,462,227 plots.

48. *Programme.*—The work done during the year may be briefly summarised as follows:—Nearly 3,500 objection suits under section 24, Regulation III of 1872, were disposed of by Assistant Settlement Officers. The Settlement Officer decided 1,058 appeals from their orders with results that were creditable to them. The Commissioner and Special Officer (Mr. A. G. Hallifax) decided between them 348 second appeals, etc., the results of which were also highly satisfactory. Nearly 40,000 copies of the village maps were distributed by sale to tenants. The records of nearly 3,000 villages were finally arranged and made over to the Deputy Commissioner, and a vast amount of miscellaneous work incidental to the closing of the operations was carried out. Costs have been realized except to the extent of some Rs. 29,000 which is covered by certificate and is due mainly from the bigger proprietors. This will be recovered by the Deputy Commissioner.

49. *Close of the operations.*—The present year sees the close of the Sonthal Parganas settlement which was begun in the autumn of 1898 under my supervision and has been in the capable hands of Mr. H. Allanson, I.C.S., since my departure in April 1905. During the 12 years maps and records have been prepared on a uniform plan for over 5,000 square miles, for, in fact, the whole of the district except the small portion that is not subject to settlement under the Regulations. In 3,500 square miles there was nothing to work upon but the proverbial half sheet of note paper on which the first rough settlement was made 30 years before. In 1,600 square miles there were the maps and records of 15 years ago prepared by the late Mr. J. Craven on a basis less scientific than the present maps and records. The rent of every raiyat and headman in the 5,000 square miles has been settled and the respective rights of landlord, headman and raiyat in every village of the tract have been clearly defined. Both documents, the rent-roll and the record of rights, are final and will be accepted as conclusive by all civil and revenue courts. There can be no dispute save regard changes that may occur after their publication.

50. In the course of the settlement the title of every person who had no share in the village lands at the previous settlement has been carefully scrutinized. The agrarian policy that has been followed in the Sonthal Parganas since the 1855 rebellion, the policy of the protection of the aboriginal races and poorer cultivators from the aggression of landlords and money-lenders, has been rigorously enforced, and the result has been to keep the village communities free from elements that threatened the extinction of their corporate life. In the course of the operations many important questions came up for consideration. These were carefully discussed with the local officers. Some of them led to correspondence between the Local Government and the Government of India and one result of the settlement has been the enactment of three Regulations for the amendment of the existing Settlement and Rent Regulations of the district.

51. To the Local Government the operations have been highly profitable, for at an expenditure of 2¼ lakhs of rupees the rent-roll of the fine Damin-i-koh estate which covers one-fourth of the district has been increased by nearly Rs. 90,000. The yield on the capital outlay has thus been 40 per cent. The expenditure would no doubt have been much heavier if the estate had not been taken up along with the rest of the district. To local proprietors the operations have also been a source of profit, for they have obtained material enhance-

ments of their rent-rolls on account of the assessment of new lands reclaimed since the first settlement. Rent-rates are nevertheless still low and the new assessment has imposed no intolerable burden on the tenantry. The settled rents have in all cases been cheerfully paid.

52. It is a matter of congratulation that the Final Report on the settlement, which was written by me in the moments of leisure that I was able to snatch from my duties as Director and was placed in the hands of the Commissioner about 1½ years after the completion of the areas originally dealt with by me, has just been reviewed by Government and been made available for the use of the local officers at the very moment that a survey and settlement have been completed on a uniform plan for the whole district. A supplementary report on the revision area dealt with by Mr. Allanson has been drafted by him and with my report will form a complete guide to the settlement operations. Mr. Allanson is now acting as Deputy Commissioner and I have no doubt that he will take every precaution that lies within his power to keep his subordinates acquainted with the contents of the settlement records and with the principles on which the administration of the Sonthal Parganas is founded. It is a district in which there is no fear that the settlement record prepared at the cost of so much time, labour, and expense, will ever be neglected by the criminal, revenue or civil courts.

KILLA BISHUNPUR IN CUTTACK DISTRICT.

Area, 17·51 square miles; villages, 42; plots, 24,351.

53. This small settlement is being done by the Orissa revision staff. During the year the records were attested, but, owing to friction between landlords and tenants, rents were not fully ascertained. Steps are now being taken to conclude the work at an early date.

VILLAGES ARILLO AND RATAGARH IN KILLA PATIA IN CUTTACK.

Area, 2 square miles; villages, 2; plots, 2,664.

54. These two revenue-free villages were notified for survey and settlement under section 101(2)(*a*) of the Bengal Tenancy Act in January last. Survey, khanapuri and attestation were completed during the year. The work is being done by the Orissa revision staff.

THE JAGIR MAHALS OF PURI DISTRICT, INCLUDING PARIKUD.

Area, 140 square miles; villages, 128; tenants, 14,151; plots, 57,927.

55. *Reopening of section 105 cases.*—The work of this settlement was finished in the previous year and the final report was submitted by the Settlement Officer, Babu Sudarsan Das, but, as mentioned in last year's report, over 3,000 section 105 cases had been struck off, because all the co-sharers did not join in the applications. In view of the decision of the Special Judge in a test case, all the cases thus struck off were re-opened for further consideration. One of the reopened cases was taken up as a test case by the Settlement Officer and it was held that the work of rent-settlement could proceed although one of the co-sharer landlords had not joined. Section 188 of the Bengal Tenancy Act, it may be noted, has not yet been extended to Orissa. The Settlement Officer's decision in the test case has recently been upheld by the Special Judge and the disposal of the remainder of the cases has been taken up since the close of the year.

CHOTA NAGPUR SETTLEMENT.

56. *Staff.*—Mr. John Reid, I.C.S., was Settlement Officer up to 7th July, when he was appointed to officiate as Director of Land Records during my absence on leave. He was succeeded by Mr. J. D. Sifton, I.C.S., who was before Assistant Settlement Officer in charge of Manbhum, except for the short time that he officiated as Deputy Commissioner of Hazaribagh. There were

two other covenanted Assistant Settlement Officers, Mr. W. H. Nelson, I.C.S., who supervised cadastral and khanapuri work during the field season in Hazaribagh and office work during recess in Ranchi, and Mr. P. S. Shettle, I.C.S., who was also employed on cadastral and khanapuri work in Hazaribagh but reverted to general duty in recess. The number of other Assistant Settlement Officers varied from 35 in the field season to 31 in the recess.

RANCHI DISTRICT.

7,109 square miles ; 3954 villages ; 3,68,059 tenants ; 38,08,612 plots.

57. *Programme.*—The programme consisted of (1) the attestation of the remaining area of the district 1,202 square miles); (2) case work under sections 83(1) and 111(6) of the Chota Nagpur Tenancy Act, 1908, in the same area; (3) final publication of the records of 1,130 square miles; (4) suits under sections 87 and 111(8) and applications for settlement of fair rents under section 85 of 856 square miles; (5) disposal of applications under section 94 in the area previously completed from attestation; (6) enquires into landlords' privileged lands under section 118 in the area under attestation; (7) disposal of *siraf* objections under section 83(1) throughout the district; (8) recovery of costs in 856 square miles; and (9) computation of costs for 1,130 square miles. The whole programme was completed except for a small balance of settlement recess work, computation and disposal of applications under section 94.

58. *Results of the operations.*—The work of settlement in this large district of Chota Nagpur has now reached its last stages, and Mr J. Reid, I.C.S., who has been Settlement Officer for many years has recently been placed on special duty to write the Final Report He has favoured me in advance with the following striking testimony to the beneficial results of the operations :—

The record of-rights for the whole of Ranchi district has now been completed. It has also been finally published for the whole district, except the 1,200 square miles in the immediate vicinity of Ranchi, the final publication of which will be done during the ensuing cold weather It is therefore interesting to examine briefly the immediate results of the operations in so far as they are at present apparent. The subdivision of Khunti was established in 1906 as a result of the settlement operations, which brought to light the existence of grave abuses and deep-seated agrarian discontent. The settlement operations were originally started in the district with a view to discovering the causes, economic and agrarian, which led to the Birsa rising of 1901. As the record-of-rights proceeded, it was found that the Courts of the district had failed to do justice to the aboriginal population, owing to their ignorance of local customs and the inability of the Munda population to compete with the Hindu zamindars in the Courts of law. The legislation of 1903 was, therefore, undertaken with a view to give greater stability to the record-of-rights, and the entries as to rents and other incidents of the large class of *muadari khuntkatti* tenures were declared to be final and conclusive. For more than half a century the Munda country had been the seat of agrarian discontent, punctuated by sporadic acts of violence which culminated in the rebellion of 1901. The immediate effect of the settlement operations is that this discontent has practically ceased. The Mundas have now got absolute security for their privileged *khuntkatti* lands in the settlement khatians, and the landlords can recover their just dues by merely filing copies of the records, instead of being put to the ruinous expense of prolonged and vexatious litigation.

The burden of the administration has been enormously decreased. It is true that for a year or two after the final publication of the records, a number of suits were brought in the Civil Courts to test the validity of certain entries; but these have since been worked off, and the burden of litigation has now decreased enormously. Only recently one of the two or three pleaders, who practised at Khunti, left the subdivision. He informed me that the result of the settlement operations was that all litigation about valuable property had practically ceased. There were still, he said, many petty suits to engage the attention of the Courts and the mukhtars; but, as disputes involving large or important areas were practically impossible, his income had been so seriously diminished that he thought it better to quit the subdivision. I regret the personal losses sustained by the pleader; but the facts are a valuable tribute to the efficiency of the settlement operations. Gumla subdivision was settled later; but the results are already apparent. Mr. Hallett, the Subdivisional Officer, writes :—

"The rents being finally fixed, there is no longer any need to hear evidence as to the rate of rent and the area of the tenancy, and protracted hearings are thereby avoided. During the past year, the majority of the contested rent-suits have come from Sesai thana,

where settlement operations are still pending. Other cases are either not contested at all, or are speedily decided by reference to the record-of-rights, no attempt being made to rebut its correctness. The result is that the parties are saved from much trouble and expense; and the only people who complain are the mukhtars and pleaders, whose incomes are undoubtedly somewhat diminished.

"With regard to the Civil Court work, the Munsif of Gumla tells me that the majority of the cases come from Chainpur, Raidih and Ghaghra thanas. He has had few cases from Biru and the other thanas in which settlement operations were completed three or four years ago, and he consequently anticipates that after a year or so the Civil Court work will be extremely light.

"The settlement operations have also had effect in criminal work. Proceedings under section 145, Civil Procedure Code, show a considerable decrease in 1909-10. I am unable to give figures for paddy-cutting cases; but during the past year, I have had few such cases from thanas, where the record was published one year ago.

"The raiyats are well satisfied with the results of the operations; and I have met inhabitants of Jaspur State who envy their neighbours in Ranchi, and express the wish that the operations should be extended to their country."

With regard to the Sadar subdivision, which comprises the most intensely cultivated and most populous part of the district, I have recently examined most of the records of rent-suits and criminal cases relating to land disposed of during the last six months. When I came to the district eight years ago, I was much struck by the fact that litigation about land and the incidents thereof was regarded much in the light of a gamble. The vernacular expression "*khel ka bat*" was commonly applied to describe the results. For this state of affairs, the Courts were not much to blame. The mutual hostility of the landlords and raiyats was usually so great that it was vain for the Courts to expect from either of them any accurate statements of facts regarding the subjects of dispute. The Court usually had little local experience and little or no knowledge of local customs and usages It could not, therefore, guage the probabilities with any degree of success. Cases have come to my knowledge, in which the rents of villages were doubled and trebled by entirely incorrect decisions as to rates of rent and the amount and values of prædial conditions. *Per contra*, I have known cases in which the incomes of landlords were similarly reduced. I am glad to say that all this is now changed. In nearly all the records which I examined, the settlement entries were accepted by the parties as binding and in all the cases the Courts gave effect to the settlement decisions. Some frivolous contentions were sometimes raised, but the main subject of dispute in rent-suits was whether the rent had been paid or not. There are, of course, still numerous suits and proceedings. This must necessarily continue as long as raiyats decline to pay their rents punctually. Disputes about land will also constantly arise. If this were not so, there would not be much need of an expensive and elaborate administration. The difference between the state of affairs which exists to-day in this district and the state with which I was familiar six years ago, is that suits can now be disposed of quickly after one or two adjournments, with little expense to the parties and little labour to the Courts. In addition, the decisions, which are founded on findings, which are the results of extensive and prolonged local enquiries, are in accordance with existing facts. It is for this latter reason that they are so generally accepted without demur. I estimate that the amount of labour involved in the disposal of revenue suits and proceedings in the district is now not more than one-fourth the amount it was when the settlement operations began; and the same is true, though perhaps in a less degree, with regard to disputes about possession of land.

SINGHBHUM DISTRICT.

DHALBHUM ESTATE AND ABHIRAM TUNG'S TENURE IN MONOHARPUR.

1,193·85 square miles; 1,692 villages; 501,282 plots.

59. *Programme.*—The programme consisted of (1) attestation, case-work and settlement recess work of Monoharpur Estate (14·5 square miles); (2) final publication of the records of the second half of the Dhalbhum Estate (592·73 square miles); (3) completion of computation for the whole of Dhalbhum Estate; (4) Recovery of costs in the first half of that area (586·62 square miles,; and (5) case work in respect of the same area. The programme was completed with the exception of the rent settlement work of Dhalbhum which was held up for the results of test appeals in the Court of the Commissioner.

60. *Attestation and case work, Monoharpur Estate.*—An objection under section 83(1) of the Chota Nagpur Tenancy Act was lodged by the Deputy Commissioner who claimed that the estate was a life-grant, resumable on the death of the grantee. The claim failed.

61. *Rent settlement in Dhalbhum.*—This was the most important portion of the year's programme in Singhbhum. The Settlement Officer has summed up the position as follows:—

Only a few test cases of fair rent settlement were tried in order to obtain the decision of the Commissioner as the appellate Court on the question of the rates to be adopted in the pargana. The original Court found by comparison of the measurement papers of 1883 with the present record, that the old system of estimating the area of a field by diagonal measurements gave a much larger bigha than an accurate survey would have given: consequently, the large excess area found in almost all holdings in the present survey was apparent rather than real. The original Court proposed, in applying the pargana rate to the present area of the holdings, to make an allowance for the larger bigha formerly used in assessment. This proposal was rejected by the Commissioner, who decided that the strict application of the pargana rates to all classes of land would result in a fair and equitable settlement. It is now found that the application of these rates will give a general enhancement of about 50 per cent. on the current assessment. This is a heavy increase in the rent-roll of the pargana but its effect is being mitigated by assigning progressive enhancements, wherever the new rent is 50 per cent. in excess of the rent at present paid.

62. *Recovery of costs.*—A sum of Rs. 1,33,403 out of a total demand of Rs. 1,35,731 was realised during the year. For the small outstanding balance of Rs. 2,328, certificates have issued.

MANBHUM DISTRICT.

Parganas Barahabhum and Patkum.

933·65 square miles; 859 villages.

63. *Programme.*—The programme consisted of (1) the cadastral survey, khanapuri, and cadastral recess work of the Patkum Estate (298 square miles); and (2) attestation, objection cases, and settlement recess work of the Barahabhum estate (635·65 square miles). The programme was fully carried out.

64. *Survey and khanapuri.*—The cadastral survey was tested by 480 linear miles of check survey, giving an average of 1·82 linear miles to the square mile. This is below the prescribed standard, but there was a large area of jungle in which the ordinary check could not be applied and the test was sufficient in the cultivated areas.

Internal disputes averaged 19 per square mile as against 3 per square mile in the previous year's area. Boundary disputes averaged 1 per square mile.

65. *Attestation.*—The number of raiyats who were found at attestation to have khuntkatti rights was about 4 per cent. of the total, while the number of non-occupancy raiyats was less than 1 per cent. The rest of the raiyats were recorded as settled or occupancy raiyats.

The attestation proceedings have shown the urgent necessity that existed for a record-of-rights in pargana Barahabhum. The necessity is two-fold. The ghatwali question has been a difficulty that has troubled Government for very many years. An attempt was made to solve it in 1883, but it cannot be said that the compromise proceedings of that year were successful. They failed for want of information. The facts are now being carefully collected by the officers of settlement, and fresh light has been thrown on many difficulties. It is fortunate that the present Deputy Commissioner, Mr. Coupland, is an experienced settlement officer, who can understand the record and appreciate its value. With his help, it may be confidently hoped that a final and satisfactory solution of the question will be attained as a result of the operations.

The second necessity for a record-of-rights lies in the nature of the relations that exist between the Midnapore Zamindari Company and their tenants. It is not too much to say that these are extremely bad. When landlords have no respect for the rights of their tenants, the only remedy is to define the rights of all parties so clearly that the aggression of the stronger is kept within reasonable limits.

HAZARIBAGH DISTRICT.

6,911 square miles.

66. The survey and settlement operations in Hazaribagh were sanctioned under the orders of the Government of India, Revenue and Agriculture Department, No. 91—527-2, dated the 21st January 1909.

67. *Programme.*—The programme consisted of (1) the cadastral survey, khanapuri, and cadastral recess work of 1,503 square miles; and (2) completion of the records of Parasnath Hill (25·05 square miles). The programme was completed.

68. *Survey and khanapuri.*—The detailed survey was checked by over 2 linear miles per square mile in addition to a check of 10 per cent. of quardrilateral lines. The check of plots khanapuried amounted to 14·47 per cent., which was ample. Internal disputes averaged only 6 per square mile. The average size of a field was 1·3 acres. The number of boundary disputes was 630. The work of cadastral survey and khanapuri presented no special features that require recapitulation. As regards the future, Mr. Sifton writes as follows:—

"Except on Parasnath Hill no attestation has yet been done in Hazaribagh and it would be premature to attempt any description of the peculiar features of the land tenures of the district. It is clear, however, that the question of landlord's privileged lands which has been of trifling interest in the districts of Chota Nagpur which have been under settlement up to the present, will assume importance in Hazaribagh. The zamindar of Padma claims that privileged lands exist in every village. No special enquiries were made at the khanapuri stage, but it appears that when a village is founded, one field in every block of land reclaimed at the early stages is set aside as landlord's zirat in which occupancy rights will not accrue. Another question which will be of great importance in the remaining areas is that of the ownership of the jungles. The zamindar puts forward the apparently extravagant claim to be in possession of all jungle and waste land throughout his estate, even in villages settled on permanent tenures."

69. *Settlement of Parasnath Hill.*—The survey and record of Parasnath Hill were taken up in advance of the rest of the district in order to throw light upon a difficulty that had arisen regarding the rival claims of the Digambara and Swetamber Jains to a lease of the hill. The work has been completed to the stage of final publication and no suits have been filed under section 87 of the Chota Nagpur Tenancy Act. A report of the results of the record has been submitted to Government and it is understood that the operations have thrown much new light on the situation and enabled Government to deal with the difficulty more satisfactorily than was formerly possible.

CHAPTER IV.

(See Appendices I to X.)

REVISION SETTLEMENT AND MAINTENANCE OF LAND RECORDS.

ORISSA REVISION SETTLEMENT.

Area 5,173·19 square miles; villages 10,835.

70. *Staff.*—Mr. James Taylor, Deputy Collector, continued in charge of the operations throughout the year, except from 12th May to 17th June 1910 when he was on privilege leave, and Mr. A. B. Petter, Deputy Collector, acted for him. Messrs. Petter and Kelly, Deputy Collectors, assisted Mr. Taylor in the supervision of the khanapuri and attestation camps. The other Assistant Settlement Officers employed numbered 31.

71. *Programme and progress.*—The work of the revision settlement was extended during the past year to the district of Puri. A small balance of the Cuttack district and 110 square miles of Balasore, previously omitted on account of flood, were also taken up. In the Puri district the work was confined to the Sadar subdivision and the Ekrajat and Khandaiti Mahals of

the Khurda subdivision. The rest of Khurda is being dealt with on separate lines. The total area covered by the revision settlement is now 5,173 square miles. The table below shows the progress made during the year in the chief items of work as compared with the previous year:—

Items of work.	Outturn in lakhs of plots.	
	1908-09.	1909-10.
1. Initial copying	19¼	15
2. Khanapuri	2×¼	28
3. Attestation	18¾	23
4. Draft publication	18¾	23
5. Section 103A cases	31,453 (cases)	30,054 (cases)
6. Check and Terij	12	21
7. Fair copying	5¼	21½
8. Comparison	6¾	20
9. Final publication	8¼	12
10. Section 105 cases	3,799 (cases)	5,741 (cases)
11. Section 106 cases	170 (cases)	1,458 (cases)

The initial copy and khanapuri work of the whole area have been completed, and the latter item is in advance of my programme of 1908 by 5½ lakhs of plots. In all other stages, except final publication, a full season's work has been accomplished, the outturn is considerably in excess of the previous year, and if the Settlement Officer has not yet been able to overtake the arrears of the settlement recess programme, he has at least prevented the arrear from accumulating. The work of attestation and section 103A camps extends so late into the hot weather and rains, that it is hopeless to expect much progress with the check and fair copy of the records attested in the same year. The arrear must be dealt with in the recess of 1911 and the following cold weather. The Settlement Officer will then have a full supply of ministerial officers to cope with it, for there will be no more attestation or objection camps to staff.

72. The expenditure on the revision settlement up to the end of the year has been Rs. 9,12,206, which is about Rs. 20,000 in excess of my estimate of 1908. On the other hand, there has been an excess of about 1 lakh of rupees in receipts. So far as I can gather from a consideration of the budgets for the present year and for 1911-12, the net cost of the settlement to Government will not much exceed the net cost anticipated in 1908, all excess expenditure being balanced by excess receipts.

73. In khanapuri the recorders' average outturn exceeded 100 plots a day. In attestation the monthly camp outturn fell from 17,258 plots per officer to 16,983. The outturn is below the 20,000 plots per month originally expected. Mr. Taylor ascribes the decline to the greater litigiousness of the area dealt with, the number of attestation disputes being 3·47 per cent., as against 2·31 in the previous year. The experiment of draft publishing in the attestation camp instead of the village, was continued with much success, and I am glad to note that the proposal to amend the Tenancy Act Rules in this respect has been taken up by Government and a revised rule published for consideration of objections.

74. Disputes between landlords and tenants regarding the rent of reclaimed lands were mostly settled amicably at the attestation stage. The bulk of the section 105 case work related to cases of this sort, and at this stage also the dispute was usually settled by compromise. Some progress was made with the disposal of pending section 40 applications for the commutation of produce rents. The great majority of the applications were disallowed on grounds to which exception cannot be taken. As explained by Mr. Taylor, more consideration must be shown to the petty Orissa zamindars in disposing of these applications, than is necessary in the case of the more fortunately-situated zamindars of Bengal. The shortage in the final publication outturn was mainly due to the fact that, under orders of Mr. Reid, the khatians of communal (*sarbasadharan*) lands in the Cuttack district were re-scrutinized as a result of the complaint of Mr. J. N. Bose, a Bengali gentleman who has acquired some Orissa zamindaris and settled in Cuttack. He objected, among other things, to the record of easements and of additional grazing lands. Mr. Reid found his objections on the former ground to be more or less untenable, but thought

that the grazing record had not in all cases been prepared with sufficient care and directed re-enquiry. Special officers had to be put on for the purpose.

75. It is a very exceptional thing to find the settlement record of rent entirely disregarded in Orissa. Mr. Taylor has brought one such case to notice. The facts have been duly reported to the Collector.

76. Seven cases of failure to grant the rent receipts prescribed by law were also reported to Collectors. In three disposed of cases, the delinquents were fined.

77. There were four prosecutions of settlement subordinates for fraud or extortion, resulting in one acquittal and two convictions, while one case is pending. The convicted persons received condign punishment.

78. *Experimental maintenance of records in Orissa.*—In paragraph 82 of last year's report, I described the results of the experiment in annual maintenance of records undertaken at the suggestion of the Government of India in the Sadar subdivision of the Balasore district, over an area of 962 square miles. The experiment was continued last year and extended to the whole district, save the portion temporarily omitted from the revision programme on account of flood. The total area was 1,600 square miles, and included 3,494 villages with 22½ lakhs of plots. Three Sub-Deputies, who were Assistant Settlement Officers of the revision settlement, were placed in charge of the work. Each had 3 inspectors and 38 recorders under him. The Sub-Deputies made field inspections up to the end of January, and started formal attestation of the recorded changes as soon as a sufficient supply of maintained records became available in February. I inspected the results of the work in the end of April 1910, and formed an opinion unfavourable to the introduction of annual maintenance. The whole question has been fully discussed in my inspection note and I need not recapitulate. Annual maintenance cannot be *done* on the lines that are deemed essential to the *success* of the scheme, without a very heavy increase of the superior supervisional staff. The cost of this staff is prohibitive. The Settlement Officer's opinion on the subject is worth quoting:—

> The experience gained, however, still points to the fact that if a trustworthy and attested record of annual changes is required, the present staff is quite inadequate.
>
> In the area attested last year, the recorder completed on an average 125 plots a day. At this rate it would take him six months and a half to finish his circle of 20,000 plots. Next season, in the same area, he may reach 130 plots per day, but even if he attains eventually 150 plots per day, it will take him 5½ months to finish his work. When we consider how little the supervision is that can be exercised over him, it is doubtful if he will ever reach an average of 150 plots per day.
>
> The attestation officer hurrying backwards and forwards over his charge of 1,200 villages with 800,000 plots covering 571 square miles, could only attest changes in the current year in 68,000 plots per month; so that, at this rate it would take him 11½ months to attest all his villages.
>
> If the percentage of changes becomes still less, and if they eventually be confined to mutations of name and new cultivation, and if we only let the Assistant Superintendent take up and decide such disputes as are connected with the record of these mutations and new cultivation, he may possibly be able to work up to one lakh of plots per *month*. Even then his attestation would take 8 months; but we cannot expect that changes will be restricted to the above two causes. Partitions of estates will throw heavy work on him from time to time, and, in addition to this work, he will be required frequently to make local enquiries and reports for the Magistrate or Collector, as he has had to do in certain cases during the past season. At the end of the coming season, and after the third attestation, we shall be able to report more fully on all these points, but I feel confident that if maintenance is to continue, it must be done on other lines than the present.
>
> The attendance of the landlords and the tenants at the camps has been very good, but I am beginning to think that for this very reason, annual operations are too harassing to the tenants. They are so suspicious that they are in daily fear that the recorder is going to tamper with the records behind their backs. Many tenants attend the attestation camp not because they have any changes to record, but in case changes may be made through the machinations of their enemies without their knowledge. This constant anxiety cannot be good for the public at large. It may subside in time with experience, but it will take a long time to do so.

79. *Maintenance of land-records in Sambalpur.*—Rules for the improvement of the system of work by patwaris were finally sanctioned during the year and, in accordance with the Board's orders, the rules contained in Central Provinces Revenue Book Circular No. III-1 are being revised on the lines of the rules recently introduced in Central Provinces.

The pay and status of the Superintendent of Land Records have been improved by the orders passed in Government No. 680A., dated the 12th February 1910. The field work of the land records staff was hampered to some extent by the detention of patwari traces in the Bengal Drawing Office to which they were sent for the compilation of thana maps. I am consulting the Director of Surveys, Bengal, about this.

More punishments than usual were inflicted on patwaris and the results are reported to be beneficial. The check work of the Revenue Inspectors was below the prescribed standard on account of the absence of the patwari traces. The work of the Revenue Inspectors was not altogether satisfactory. The isolation of the district renders it difficult to get an adequate supply of competent men trained in the Central Provinces system. The inaccuracies discovered in the check of the *jamabandi* entries by kanungos were 2·5 per cent., which shows an improvement compared with last year. The office of the Kanungos of the Sambalpur Tahsil was inspected and found to be in fair order.

Village boundary marks received special attention and were found to be in generally good condition. The village papers were punctually filed in the Tahsil offices before the close of the year.

In forwarding the annual report of the Superintendent of Land Records on the *bhet-begar* system, the Deputy Commissioner has recorded the following opinion:—

"My general opinion on the subject is the same as last year. The privilege is probably abused in a few villages but not to an extent which makes the tenants consider it worthwhile to complain. In other villages, especially those in the zamindaries, excess *bhet-begar* is willingly rendered as an act of grace."

80. *North Bihar Mutation Offices.*—The working of the mutation offices established at Bettiah, Hajipur and Mahnar under the Land Records Maintenance Act, VII of 1895, continues to be as unprofitable and unsuccessful as ever. The figures show a decline on the previous year, and, in view of the proposed revision settlement of North Bihar, the three offices might well be abolished. The loss on the year's working amounts to Rs. 1,444.

81. *Record of mutations in Government and Wards' estates.*—A summary of the information received from district officers regarding the record of mutations in Government and Wards' estates, for which a record-of-rights has been prepared, is given in Appendix VII. The Khurda estate of district Puri has been excluded, as the results of the *milan khasra* operations have not been reported. Generally speaking, the record of mutations is adequate in Government estates, but much below the prescribed standard in Wards' estates. The total percentages are 7·4 and 2·4, respectively. Amongst larger Government estates, the record is lowest in Midnapore, Bhagalpur and the Santhal Parganas. It is conspicuously low in the following large Wards' estates:—Pachetgarh, Chautaria, Khojwa, Sursand (1), Narhan, Chapran, Sonbarsa, Parikud. The managers of these estates should have their attention specially directed to the importance of the work.

82. *Inspection of rent-rolls.*—The results of the inspection of rent-rolls by the two classes of agency, subordinate and superior, are shown in Appendix X. Instructions were laid down in Board's letter No. 3416A., dated 15th September 1909, regarding the definition of these two classes, but it is not clear from the returns that the instructions have been followed in all cases. It is not credible, for example, that in the Kukrahati circle of Majnamutha estate, district Midnapore, the percentage of check by both agencies was 100, and that no unreported mutations were detected by either agency. On the whole, the amount of check was adequate both in Government and Wards' estates, but I am not satisfied that the statement gives a reliable or intelligible return of the actual work done in many districts.

CHAPTER V.

(*See* Appendix XI.)

MAINTENANCE OF BOUNDARY MARKS.

83. *General.*—The annual reports on the maintenance of boundary marks show that the subject continues to receive the attention of district officers.

Two new rules, 815A and 815B which embody the existing orders on the subject, have been added to the Settlement Manual, but as the subject was not included in the list given at pages 47-48, Section III, Chapter II. of the Register and Return Manual, many Collectors failed to deal with it in their Land Revenue Reports for 1909-10. Details of the results of inspections will be found in tabular form in Appendix XI. From the district reports, I note the following :—

84. *Burdwan Division.*—A number of marks on the camping grounds of the Asansol subdivision were found to be damaged or missing and the District Engineer has been asked to take action in the matter. In the Sujapur char of Katwa 3 marks were demolished and the offenders have been prosecuted. No steps have been taken to repair and renew the damaged and missing marks of the Hukmapur estate in Birbhum. At cadastral survey and khanapuri, the Settlement Officer of Rampur Hât found that many traverse trijunction marks were missing. He has arranged to replace the missing stones and to have them re-checked at attestation. Boundary pillars were put up in several Government estates that came under settlement during the year. In Midnapore boundary mark maps and registers of the temporarily-settled estates of Pataspur and Sujamutha were prepared, and the marks were made over to the charge of dafadars and chaukidars. The Collectors also received from the Settlement Officer of Midnapore registers and maps of the trijunction stones of the areas in which the settlement operations are drawing to a close. Kanungos were deputed to distribute the stones to dafadars. In Contai subdivision 150 marks were found to be damaged or missing. 6 have been replaced and arrangements for the supply of the rest are under consideration. In Hooghly 340 boundary pillars were erected by the Settlement Officer, mostly in the Damodar *diara* estates, and maps and registers have been prepared. In Howrah district, 9 damaged pillars of Government estates in Uluberia were repaired, but no action was taken in the Sadar estates, as these will probably be sold.

85. *Presidency Division.*—350 stone pillars were erected during the year in the Panchannagram estate of the 24-Parganas at a cost of Rs. 454. In Nadia, four additional Government estates were demarcated during the year with 107 pillars, and 106 pillars found missing or damaged, on inspection, were replaced at a cost of Rs. 70. In Murshidabad, steps have been taken to replace the missing pillars in Government estates. In Jessore, 383 new pillars were erected during the year in 16 private estates. The Collector of Khulna made over the boundary maps and registers of the Dihi Bhadra estate to the Subdivisional Officer of Satkhira and the Collector of the 24-Parganas for distribution of the stones to dafadars, but these officers have not reported the completion of the work nor the results of inspections. Attention was paid to the inspection of boundary marks in other parts of the district. Several disappeared through diluvion. Others were repaired or replaced. In all Rs. 54-8 was spent during the year on the maintenance of boundary marks.

86. *Patna Division.*—205 stones out of 3,250 erected in the Patna district at traverse survey, were re-checked at attestation. 6 found missing were replaced. 6 cases were instituted under section 56 of the Survey Act and fines amounting to Rs. 35-13 were imposed. Pillars in Government and Wards' estates were duly inspected and found to be generally in order. 216 new pillars were erected during the year in the Government estates in Gaya, and out of 9 pillars reported to be damaged or missing 2 were restored during the year. The boundary marks in the Deo and Maksudpore estates were inspected by the managers and their subordinates and all missing marks were restored during the year. In Shahabad, a sum of Rs. 45-3 was spent on the restoration of 55 damaged or missing marks.

87. *Tirhut Division.*—Under Board's order No. 1531A., dated the 19th March 1907, the work of maintenance has been confined to Government and Wards' estates. All damaged or missing stones of the Government and Bethia Raj estates were duly restored. 181 out of 627 stones in the Hathwa Raj estate were restored and steps have been taken to deal with the rest. In the Bethia estate in the Champaran district about one third of the boundary marks were found to be damaged or missing. These have been

replaced at a cost of Rs. 5,224. Steps were also taken by the Subdivisional Officer of Bethia to replace 53 marks of zamindari estates. In Muzaffarpur the managers of Government and Wards' estates did something to preserve boundary marks, but there does not appear to have been any systematic inspection. In Darbhanga, a sum of Rs. 73-9 was spent by the Narhan Wards' estate on the restoration of 53 out of 64 missing marks, and the others not yet replaced are being dealt with.

88. *Bhagalpur Division.*—The maintenance of boundary marks received adequate attention in Bhagalpur, the Sonthal Parganas and Darjeeling. The Collector of Bhagalpur had the settlement trijunction stones inspected by dafadars, chaukidars and thana officers, working under the supervision of a Deputy Collector in the Sadar and under the Subdivisional Officers in subdivisions. Most of the stones were found to be in place, some had been washed away by river action, a few were replaced. The registers are not yet complete for subdivisions. When these have been completed, the work of maintenance will be done systematically throughout the district. In the Sonthal Parganas, the Settlement Officer completed his inspection of boundary stones for the district and during the year replaced all those that were found to be missing. Complete maps and registers have now been made over to the Deputy Commissioner. The boundary stones of the Darjeeling khas mahals were regularly inspected and maintained. In the two districts of Monghyr and Purnea, little was done to preserve boundary marks, on the ground that complete maps and registers have not yet been received from the Settlement Department. I will enquire what progress has been made with these during my cold weather tour.

89. *Orissa Division.*—The inspection and maintenance of boundary marks in the three districts of Cuttack, Balasore and Puri, were under the control of the revisional settlement staff and the cost of the restoration of the numerous marks found to be damaged or missing was borne by the settlement. Of 988 missing or damaged stones, 928 were restored and the balance will be made good this year. The subject also received sufficient attention in Angul, where about 50 per cent of the boundary pillars were inspected during the year. 14 new pillars were erected on the Athmalik boundary. In Sambalpur, prompt action was taken by the Land Records staff to replace all damaged or missing marks. All marks are inspected by the patwaris under the supervision of the revenue inspectors and the village mukaddams are responsible for repairs. Of 114 marks found missing, all but five were replaced.

90. *Chota Nagpur Division.*—The Deputy Commissioner of Hazaribagh has made provision for the repairs of 13 pillars found to be damaged in Government estates. The boundary mark maps and registers of thanas Bishunpur, Chainpur and Ghagra were made over by the Settlement Officer of Chota Nagpur to the Deputy Commissioner and the marks were distributed to the chaukidars under the supervision of a Deputy Collector. All the marks of Government. Wards' and encumbered estates were inspected and found to be in order, and about half of the marks in zamindari estates were also inspected. In Palamau, all the boundary stones of Government estates were regularly inspected by the mutation staff and the missing and damaged marks were restored by the village headmen. In Manbhum, the boundary cairns put up last year by the Settlement Department in pargana Barabhbhum were inspected at attestation. The trijunction mark maps and registers will be made over to the Deputy Commissioner shortly. The Deputy Commissioner of Singhbhum has given the subject much attention during the year. In the Kolhan inspection of boundary marks is done by the kanungo, the Kolhan Inspector and the mankis under the supervision of the Deputy Collector in charge of the estate. Estimates have been framed for the restoration of all stones found damaged or missing. In the Porahat estate the Raja and the independent tenure-holders are responsible and have to submit annual reports. A certain amount of check is also carried out by the Kanungo. Steps have been taken to make good all reported damage. For Dhalbhum maps and registers have been received from the Settlement Department and the stones have been made over to the charge of chaukidars whose inspection of them is supervised by the thana officers. Arrangements were made to erect 31 pucca pillars on the demarcated boundary between Dhalbhum and Mohurbhanj.

CHAPTER VI.

Charge and Tours of the Director and notice of officers.

91. *Charge.*—I was in charge of the Department throughout the year except for three months during the second half, when I was on privilege leave and Mr. J. Reid, I.C.S., acted for me.

92. *Tour.*—During the field season between November 1909 and April 1910, I was on tour for 109 days and inspected the Orissa, Bihar and Rampur Hât settlements thrice, the Hooghly and Chota Nagpur settlements twice, and the Midnapore, Khulna and Parikud settlements once. Mr. Reid spent 56 days on tour between July and September 1910 and visited the Hooghly, Ranchi and Midnapore settlements twice and the Birbhum, Orissa and Bihar settlements once. The total number of days spent on tour was thus 165 days.

93. *Notice of Officers.*—I desire to bring to the notice of the Board the good work done during the year by many officers of the Department. Messrs. Murphy and Hubback, as Settlement Officers of Bihar, have maintained the high standard of work of that settlement. They were ably assisted by Messrs. James and Philip and by Babu Nilmani Dey, who justified his employment in the field season as an Assistant Settlement Officer in charge. Mr. J. Reid, I.C.S., has completed the last of five years of devoted service in the Chota Nagpur Settlement, and has had the satisfaction of seeing the successful conclusion of the operations in the Ranchi district. He is now engaged on the preparation of the Final Report, which will record the progress and achievements of the past nine years. Mr. J. D. Sifton, I.C.S., who acted as Settlement Officer while Mr. Reid officiated for me in the last quarter of the year, has shown himself well-qualified for the important charge now entrusted to him. The work of Mr. P. S. Shettle, I.C.S., who last year completed his first field season on settlement duty, was full of promise. Mr. H. Ll. L. Allanson, I.C.S., has brought to a happy termination his important work in the Sonthal Parganas settlement, to which he has been attached for the last six years. Mr. J. Taylor has continued to perform with credit his onerous duties in the Orissa Revision settlement. He was assisted in his supervisional work by Messrs. Petter and Kelly. Babu Rampada Chatarji has discharged to my satisfaction the work that was left to him in the Midnapore Settlement. In spite of many difficulties of season, Mr. P. M Robertson has made a good start in the Rampur Hât Settlement. Babu Mahendra Nath Gupta has done well in Hooghly and Babu Akshay Kumar Mukharji in Mokimpur. I am more than satisfied with the excellent work of my Personal Assistant, Babu Charu Chandra Kumar, in the Calcutta office.

94. The following officers have been selected for special mention from this year's reports. Many others have done good work—

Deputy Collectors.

1. Babu Suresh Chandra Chakrabatti.
2. Mr. Nrishingha Ranjan Mukharji.
3. Maulvi Shamsuddin Haidar.
4. „ Abul Khair Muhammad Ishaq.
5. Babu Bhuban Mohan Chatarji.
6. Babu Akhauri Gopi Kishore Lal.
7. „ Jatindra Narayan Mukharji.
8. „ Surendra Nath Sarkar.
9. Maulvi Syed Dilawar Ali.*
10. Babu Karali Charan Ganguli.*

* These two officers were promoted at the close of the year. The promotion list also includes Babu Jatindra Kumar Ray and Babu Satis Chandra Guha, who were for many years in the Settlement Department and have just left it.

Sub-Deputy Collectors.

1. Babu Shamshir Jang Bahadur.
2. Pandit Lakshmi Misra.
3. Babu Atul Gopal Rai.
4. „ Khetra Mohan Mukharji.
5. Maulvi Anwar Karim.
6. Babu Satamanyu Mukharji.
7. „ Surendra Nath Banarji, No. II.
8. Maulvi Syed Amanat Hussain.
9. Babu Hari Das Ray.
10. „ Rajani Kanta Sen.
11. Babu Satkauri Pati Ray.
12. Mr. H. McPherson.
13. „ F. H. Alderson.
14. Babu Chandra Kumar Mathur.
15. „ Madhab Chandra Misra.
16. „ Radha Charan Das.
17. „ Phanindra Nath Gupta.
18. „ Bansidhar Naik.
19. „ Basanta Kumar Ray.
20. „ Akshay Kumar Mukharji.†

† Outsider Assistant Settlement Officer promoted at the close of the year.

Munsifs.

1. Babu Amar Nath Chatarji.
2. Babu Radha Kanta Ghose.

Others.

1. Babu Mahendra Nath Sarkar.
2. „ Pasupati Ghose.
3. „ Ramesh Chandra Ghose.
4. Mr. H. W. Alderson.
5. Babu Phanindra Bhusan Mitra.
6. „ Daitari Misra.
7. „ Harihar Banarji.
8. „ Jatindra Nath Mukharji.

I regret that I have to record the death during the year of Babu Kshetra Bhusan Prasad, Deputy Collector, who did excellent service in the Bihar Settlement for over 15 years. It was in the Purnea Settlement that he contracted the illness to which he eventually succumbed.

95. *Relations with other Departments.*—In conclusion I desire to acknowledge the help that I have received throughout the year from the Director of Surveys, Lieutenant-Colonel Crichton, C.I.E., and from the Commissioners and District Officers with whom the work of settlement has brought me into contact.

I have the honour to be,

SIR,

Your most obedient servant,

H. McPHERSON,

Director of the Department of Land Records, Bengal.

APPENDICES.

[*N.B.*—Figures in these Appendices which do not agree with those in last year's Report are revised figures.]

General Progress of Survey and Settlement

Division and District.	Name of estate or tract under settlement.	Date of inception of operation.	Estimated area, in square miles, under settlement.	Total number of villages.	Area cadastrally surveyed, in square miles.			Area in which records have been prepared for attestation—		
					Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11
										I.—Settlement of
Burdwan.										(a) *Government*
Midnapore ...	Balarampur and other petty (government estate.	8th Oct. 1903	91·26	161	91·26	...	91·26	91·26	...	91·26
Hooghly ...	7 Government estates.	Dec. 1908 ... March 1909 ... January 1910	1·66	11	1	·66	1·66	1	·66	1·66*
Orissa.										
Sambalpur ...	Sambalpur Mahal	1st Feb. 1906	2	1	2	...	2	2	...	2
Burdwan.										(b) *Temporarily*
Midnapore ...	Kalyanpur, Jalamuitha, Malsamuitha, Bhotia and other estates.	8th Oct. 1903	599·96	1,354	599·96	...	599·96	599·96	...	599·96
Hooghly ...	16 Temporarily-settled estates.	December 1909	·25	11	...	·25	·25	...	·25	·25
Burdwan.										II.—Other
Birbhum ...	Rampurhat (Bonhal villages).	22nd Jan. 1919	132·03	105	...	132·03	132·03	...	131·23	(a) *Ori* 131·23
Midnapore ...	Dipakneshand, Jamirapal and 13 other petty estates.	8th Oct. 1903	468·21	1,460	468·21	...	468·21	468·21	...	468·21
	Nayabasan and Sobini.	7th July 1906								
	Jhargram and Chairs.	24th Jan. 1908								
Hooghly ...	31 Zamindari estates.	January 1906 to June 1909.	37·21	153	30·83	2·33	37·21	30·17	6·83	36·66
Presidency.										
Jessore ...	Mokimpur estate	12th Feb. 1910	26·26	29	...	26·26	26·26	...	21·26	26·26
Bhagalpur.										
Bhagalpur ...	South Bhagalpur	October 1905	1,622	2,265	1,622	...	1,622	1,622	...	1,622
Monghyr ...	South Monghyr ...	October 1906	2,354	2,376	2,354	...	2,354	2,354	...	[2,354
Santhal Parganas ...	Zamindari estates (3rd Programme.)	October 1906	1,590·67	2,290	1,590·67	...	1,590·67	1,590·67	...	1,590·67
Patna.										
Patna ...	Patna District ...	1st Nov. 1906	1,955	2,507	1,955	...	1,955	1,943	1	1,944
Shahabad ...	Shahabad District	Nov. 1906 ...	0·373	Not known	333	1,504	1,837	333	1,504	1,837
Orissa.										
Cuttack ...	Killa Bishnupur	16th Feb. 1909	17·21	43	17·21	...	17·21	17·21	...	17·21
Ditto ...	Aritto and Ratagarh.	10th Jan. 1910	2·06	2	...	2·06	2·06	...	2·06	2·06
Puri ...	Parikud ...	9th Dec. 1908	140	138	140	...	140	140	...	140
Chota Nagpur.										
Ranchi ...	Ranchi District ...	1st Mar. 1902	7,136	3,364	7,109	...	7,109	7,109	...	7,109
Singhbhum ...	Dhalbhum ...	1st Sept. 1905	1,179·25	1,686	1,179·25	..	1,179·25	1,179·25	...	1,179·25
Ditto ...	Mouchampur tenure.	1st Nov. 1908	14·30	6	14·30	...	14·30	14·30	...	14·30
Manbhum ...	Barabhabum ...	1st Oct. 1906	635·25	857	635·25	...	635·25	635·25	...	635·25
Ditto ...	Patkum	1st Oct. 1909	295	262	...	296	296	...	296	296
Hazaribagh ...	Hazaribagh District.	1st Oct. 1909	6,911	Not known	...	1,606	1,606	...	1,606	1,606
Orissa.										(b) *Revi*
Cuttack ...	Cuttack	20th Jan. 1908	2,270·74	5,091	1,996·71	275·03	2,270·74	1,996·71	278·03	2,270·74
Balasore ...	Balasore ...	22nd Sept. 1906	1,707·21	2,805	1,598·88	108·33	1,707·21	1,598·88	108·33	1,707·21
Puri ...	Puri	11th Oct. 1909 ... 1st June 1910 ... 11th Sept. 1918	1,095·24	2,139	...	1,095·24	1,095·24	...	1,095·24	1,095·24
										(c) *Experimental*
Balasore ...	Sadar Sub-division. Bhadrak Subdivision.	1st Nov. 1906 ... 1st Nov. 1909	1,600·35	3,494	1,600·35	...	1,600·35	...	1,595·90	1,595·90
	Total ...		33,363·23	34,769	23,194·45	5,852·79	29,047·23	21,578·47	6,991·38	28,139·85

* Includes cost of survey and settlement
† Of this the Municipal Committee
‡ Included in cost of survey and settlement
§ Exclusive of cost incurred
‖ Including 11 miles of Municipal ro

DIX I.

during the year ending 30th September 1910.

SQUARE MILES.									COST OF OPERATIONS.			TOTAL COST-RATE IN THE OPERATIONS SHOWN AS COMPLETED IN THIS RETURN.	
IN WHICH ATTESTATION HAS BEEN COMPLETED—			IN WHICH FINAL PUBLICATION HAS BEEN CONTINUED.			IN WHICH FINAL PUBLICATION HAS BEEN COMPLETED—							
Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Estimated.	Actual.
12	13	14	15	16	17	18	19	20	21	22	23	24	25
LAND REVENUE.									Rs.	Rs.	Rs.	Rs.	Rs.
Estates.													
91·26	...	91·26	91·26	...	91·26	44·78	31·67	76·45	3,273	973	4,246	...	...
...	1	1	...	...	...	...	...	...	3,414	1,507*	3,921	...	...
1	...	2	...	2	2	...	2	2	113	201	314†	198	198
ettled Estates.													
559·74	·22	559·96	559·74	·22	559·96	168·39	389·61	557·60	5,43,722	61,907	6,05,629	...	...
*													
...	...	...	...	...	...	...	...	...	...	...‡	...	...	...
SETTLEMENTS.													
ginal.													
...	...	...	...	...	...	...	...	...	...	17,833	17,833	...	...
468·21	...	468·21	468·21	...	468·21	396·80	71·41	468·21	1,33,887	16,044	1,49,931	...	...
15·50	19·75	34·25	15·23	18·33	33·56	5	6·16	9·16	26,061	17,819	43,880	...	...
...	...	...	...	...	...	...	...	...	...	5,074	5,074	...	...
1,682	...	1,682	1,682	...	1,682	1,682	...	1,682	2,86,869	7,881	3,03,445‖	...	...
2,185	70	2,276	2,185	71	2,256	1,618	601	2,219	2,33,051	92,527	4,25,608	...	...
1,999·47	...	1,999·47	...	...	...	1,999·47	...	1,999·47	2,85,668	58,811	3,43,776	200	321
811	1,135	1,946	811	1,133	1,944	76	721	796	1,33,221	2,06,167	3,39,388	...	...
...	330	330	...	330	330	...	...	...	67,466	2,99,696	3,67,154	...	...
...	17·51	17·51	...	17·51	17·51	...	...	...	3,495	3,067	6,562	...	...
...	2·06	2·06	...	...	...	...	...	...	...	546	546	...	...
140	...	140	140	...	140	140	...	140	51,282	1,888	53,170	488	388
5,207	1,992	7,199	5,207	1,992	7,199	4,777	1,130	5,907	10,60,086	1,05,380	11,65,916	...	...
1,179·25	...	1,179·25	1,179·25	...	1,179·25	686	593·25	1,179·25	2,78,454	2,075	2,78,529	...	...
...	14·50	14·50	...	14·50	14·50	...	...	...	723	402	1,125	...	...
656·25	...	656·25	656·25	...	656·25	...	...	...	97,511	99,395	1,96,906	...	...
...	...	...	...	...	...	...	...	...					
...	25·05	25·05	...	25·05	25·05	...	25·05	25·05	...	1,96,194	1,96,194	...	...
sional.													
656·73	1,212·34	1,869·07	656·73	1,206·45	1,863·18	...	413·71	413·71					
1,886·23	107·74	1,706·23	1,886·23	107·74	1,706·23	1,298·23	171·17	1,469·35	2,86,559	2,36,647	5,13,206	...	...
...	...	...	...	...	...	...	...	...					
Maintenance.													
...	890·23	890·23	...	890·23	890·23	...	...	...	31,885	40,760	72,645	...	...
17,456·24	5,043·00	22,499·24	15,856·79	8,024·05	23,880·87	13,172·45	4,301·93	16,474·38	38,64,013	16,54,797	54,18,809	...	...

of temporarily settled estates.
‡ distributed Rs. 156.
of Government estates.
by Survey Department.
previously surveyed area cadastrally surveyed and khanapuried but not attested.

APPENDIX II.

Return of Survey and Khanapuri Inspection and of Boundary and Internal Disputes during the year ending 30th September 1910.

Name of area under Settlement.	CADASTRAL SURVEY.						KHANAPURI.					Number of boundary disputes decided.	Number of internal disputes decided.
	Area in square miles surveyed during the year.	PERSONAL PARTAL IN LINEAR MILES.			Independent partal in linear miles.	Total partal in linear miles.	Total number of plots khanapurited.	NUMBER OF PLOTS TESTED.					
		By Assistant Settlement Officers.	By Kanungos and Head Inspectors.	By Inspectors.				By Assistant Settlement Officers.	By Kanungos and Head Inspectors.	By Inspectors.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
						Original.							
Hooghly: Government Estates.	0·03	1·12	.....	1·20	1·35	2·87	1,038	20	.....	160	180	.....	.....
Hooghly: Temporarily-Settled Estates.	0·25	.....	.....	5·70 chains.	.....	5·70 chains.	903	4	.....	3	7	.....	.....
Birbhum: Rampur Hat (Santhal villages).	138·63	19·13	20·16	289·63	148·44	448·35	146,800	8,171	1,611	34,155	43,937	70	6,356
Hooghly: Zamindari Estates.	2·33	1·57	.....	4·63	1·37	7·37	5,368	88	.....	680	767	3	3,338*
Jessore: Mokimpur	26·86	12·67	.....	89·43	36·96	90 06	33,457	1,117	.....	2,005	3,122	19	82
Shahabad ...	1,504	819·53	997·13	2,572·73	3,208·36	6,402·62	1,549,931	30,890 1,9552	60,069	221,963	305,963	476	60,530
Cuttack: Arilla and Katagarh.	135	3·86	.....	109·35	45·24	158·45	.....	.....	.....	.....	.....	.....	.....
	5·06	.....	.....	.....	.....	... ...	2,004	354	.....	384	738	.....	6
						Manbhum.							
Pulum	326	18	44	413	352	763	206,117	727	2,560	37,333	39,710	227	5,622
Hasarihagh ...	1,508	228	349	1,259	1,004	2,836	925,730	2,549	17,146	135,171	154,866	632	9,845
						Sections.							
Cuttack	376·03	.....	.....	.....	.....	.....	788,164	9,028	4,309	24,508	37,709	.....	1,519
Balasore	108·33	15 chains.	.....	31 chains.	.....	46 chains.	130,115	5,626	1,009	20,465	34,743	1	1,000
Puri	1,036·24	.....	.....	.....	.....	.....	1,827,655	35,645	36,827	124,721	197,013	.....	5,446
						Experimental Maintenance.							
Balasore	.....	... ...	.....	.....	.....	.....	2,146,953	4,568	.....	111,079	115,647	.....	185

* Includes a few disputes in Government Estates.
† Four-inch Topographical Survey of Ganjam class.
‡ Additional check by comparing khasras with maps only.

APPENDIX III.

PART A.

Progress in settlement of rents under section 104, Act VIII of 1885, in areas that are under settlement of Land Revenue during the year ending 30th September 1910.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	Number of tenants for whom rents have been proposed— To the end of the previous year.	During the year.	Total.	Number of villages for which settlement rent-roll has been published in draft— To the end of the previous year.	During the year.	Total.	Objections under section 104E. Instituted.— To the end of the previous year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
Midnapore: Government and temporarily—settled estates.	601·28	1,645	190,845	196,540	298	196,838	1,590	55	1,645	71,896	1,680	73,576
Sambalpur Mahal	1	1	59	...	59	59	...	1	1	...	...	...
South Mongkyr ...	2·70	1	177	...	177	177	...	1	1	...	...	...

Estate or tract under settlement.	Objections under section 104E. Disposed of— To the end of the previous year.	During the year.	Total.	Number of villages and tenants of which during the year a settlement rent-roll has been completed— To the end of the previous year. Villages.	Tenants.	During the year. Villages.	Tenants.	Total. Villages.	Tenants.	Comparative rental of villages and tenants in columns 19 and 20. Former rental.	Settled rental.	Difference per cent. of col. 24 on col. 23.
	14	15	16	17	18	19	20	21	22	23	24	25
										Rs. A. P.	Rs. A. P.	
Midnapore Government and temporarily settled estates.	66,972	6,404	73,376	630	76,064	984	120,730	1,614	196,794	398,114 0 0	496,040 0 0	+23·75
Sambalpur Mahal	...	...	...	...	...	1	59	1	59	207 0 0	276 0 0	+34·29
South Mongkyr ...	...	...	...	...	...	1	177	1	177	3,001 0 0	3,953 8 0	+33·97

APPENDIX III.

PART B.

Progress in settlement of rents in areas that are not under settlement of Land Revenue during the year ending 30th September 1910.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	Proceedings under section 105(c), Bengal Tenancy Act.				Number of section 105 cases which have been instituted—			
				Number of tenants.	Rent accordingly to landlord.	Rent legally payable.	Rent settled by compromise.	To the end of the previous year.		During the year.	
								Number.	Number of tenants.	Number.	Number of tenants.
1	2	3	4	5	6	7	8	9	10	11	12
Midnapore.					Rs.	Rs.	Rs.				
Nayabasan and Kohiri.	136·26	671	30,997	337	...	...	330	1,797	19,511	...	...
Dipakiarchand, Jamirpal and other petty estates.	71·25	167	13,125	...	...	...	...	494	6,047	329	331
Jhargram and Chaita.	210	622	15,500	...	...	...	...	...	...	376	5,461
Hooghly-Zamindari Estates.	94·25	107	18,557	449	6,365	6,365	7,107	804	804	1,353	1,353
South Bhasalpur ...	1,629	2,968	150,506	...	...	...	...	1,861	26,975	...	...
South Monghyr ...	935	266	182,540	19,457	835,063	...	2,18,464	...	...	184	2,185
Patna district ...	1,944	2,407	623,626	7,960	1,26,007	...	1,26,160	...	...	66	1,049
Shahabad ...	533	617	114,935	503	7,124	Not available.	7,091	...	...	...	...
Ranchi	8,152	1,274	188,389	...	...	...	...	12	19	562	8,307
Singhbhum, Dhalbhum Estate.	1,179	1,056	78,900	...	...	...	...	1,018	17,560	854	11,560
Manbhum.											
Barabhbhum ...	636·75	697	86,116	...	...	...	...	...	...	640	640
Cuttack	443·71	1,117	215,361	...	...	...	...	...	...	2,027	2,073
Balasore ...	115·055	3,416	600,726	...	...	...	...	13,119	12,659	535	535

Estate or tract under settlement.	Number of sections 105 cases which have been instituted—		Number of cases which have been disposed of—						Of tenants in column 12.		
	Total.		To the end of the previous year.		During the year.		Total.		Former rental.	New rental.	Difference, per cent + or —.
	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.			
13	14	15	16	17	18	19	20	21	22	23	
Midnapore.									Rs.	Rs.	
Nayabasan and Kohiri.	1,797	19,511	1,667	19,513	...	...	1,667	19,513	...	...	...
Dipakiarchand, Jamirpal and other petty estates.	494	5,953	423	5,054	68	808	486	5,832	5,995	6,497	+15·28
Jhargram and Chaita.	376	5,422	...	...	324	5,572	324	5,572	11,500	15,671	+36·27
Hooghly-Zamindari Estates.	2,157	3,157	996	996	180	180	706	706	996	1,122	+1·015
									374*	374*	
South Bhasalpur ...	1,861	30,772	1,639	13,833	197	1,976	1,546	19,611	17,535	19,274	+9·86
South Monghyr ...	154	3,753	...	...	51	277	51	277	31,850	25,571	+8·70
Patna district ...	66	1,049	...	...	39	606	39	606	4,753	5,433	14·30
Shahabad ...	...	...	...	...	...	...	...	...	...	...	...
Ranchi	562	2,956	...	...	56	898	56	898	1,053	1,316	·24
Singhbhum Dhalbhum, estate.	1,872	29,006	...	...	11	235	11	235	920	1,271	·37
Manbhum.											
Barabhbhum ...	640	640	...	...	...	...	...	...	...	...	...
II.—Revisional.											
Cuttack ...	2,027	2,073	...	...	733	793	733	793	1,513	1,953	+29·05
Balasore ...	13,654	13,515	7,277	7,753	6,959	5,434	12,236	13,189	6,737	16,794	+149·23

* New assessments on lands held liable to new rental.

APPENDIX III.

PART C.

Progress in disposal of Case-work other than settlement of fair rents during the year ending 30th September 1910.

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total. instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
I—LAND REVENUE SETTLEMENTS.							
Midnapore.		*(a) Government Estates and Temporarily-settled Estates.*					
Section 40 ...	27,822	21	27,843	27,822	21	27,843	...
Do. 103A ...	4,001	217	4,218	1,318	94	1,467	2,811
Do. 108A ...	...	1,528	1,528	...	1,280	1,280	248
II—OTHER SETTLEMENTS.							
Birbhum.		*(a) Original.*					
Rampurhât (Sonthal villages). Boundary disputes ...	...	70	70	...	70	70	...
Midnapore.							
Section 106 ...	1,182	523	1,705	1,159	469	1,628	77
Hooghly.							
Boundary disputes ...	...	6	6	...	3	3	3
Section 103A ...	3,092	1,218	4,310	2,051	1,644	3,695	615
Do. 106 ...	396	559	955	371	197	568	387
South Bhagalpur.							
Section 40 ...	4,243	38	4,281	3,033	1,175	4,208	73
Do. 106 ...	681	...	681	622	57	679	2
South Monghyr.							
Section 40 ...	5,882	6,374	12,256	2,752	6,808	9,560	2,696
Do. 103A ...	21,156	30	21,186	21,156	30	21,186	...
Do. 106 ...	291	264	555	161	285	446	109
Patna District.							
Boundary disputes ...	990	13	1,003	989	14	1,003	...
Section 40 ...	2,545	2,184	4,729	258	2,505	2,763	1,966
Do. 103A ...	22,855	23,727	46,582	22,854	23,728	46,582	...
Do. 106 ...	...	92	92	...	30	30	62
Shahabad District.							
Section 103A ...	...	17,127	17,127	...	13,954	13,954	3,173
Do. 40 ...	...	39	39	...	...	...	39
Sonthal Parganas.							
Zamindari estates, 3rd programme.							
Section 24, Regulation III of 1872 ...	18,359	1,267	19,626	16,187	3,439	19,626	...

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
Cuttack.							
Kills Bishunpur ...	...	1	1	...	1	1	...
Ranchi.							
Boundary disputes ...	2,706	...	2,706	2,687	19	2,076	...
Section 103A, B. T. A.							
Do. 83(1) C. N. T. A.	27,147	12,607	39,753	27,146	12,607	39,753	...
Do. C.N. T. A. (*sirat* objections.)	...	875	875	...	875	875	...
Section 9A C. N. T. A.							
Do. 111(6) C. N. T. A.	2,561	657	3,218	2,561	657	3,218	...
Section 9A(8) C N. T. A.							
Do. 111(8) C. N. T. A.	57	24	81	44	16	60	21
Section 61, C. N. T. A.	182	273	455	182	259	441	14
Do. 87, C. N. T. A.	52	317	369	...	68	68	301
Do. 94, C. N. T. A.	13	2,057	2,070	...	1,242	1,242	828
Singhbhum.							
Dhalbhum estate.							
Section 87, C. N. T. A.	77	42	119	...	82	82	37
Do. 106, B. T. A.							
Do. 111(8) C. N. T. A.	3	3	6	...	3	3	3
Section 61, C. N. T. A.	1,920	104	2,024	...	48	48	1,976
Do. 40 B. T. A. ...							
Section 120 C. N. T. A.	11	...	11	...	11	11	...
Section 130 C. N. T. A.	202	59	261	...	206	206	55
Monoharpur tenure.							
Section 87(1) C. N. T. A.	...	26	26	...	26	26	...
Manbhum.							
Pargana Barabhum.							
Section 83(1) C. N. T. A.	...	6,235	6,235	...	6,235	6,235	...
Section 111(6) ...	...	14	14	...	14	14	...
Do. 61 ...	...	30	30	...	30	30	...
Palkum.							
Boundary disputes ...	...	227	227	...	226	226	1
Hazaribagh.							
Boundary disputes ...	...	630	630	...	630	630	...
Section 83(1) C. N. T. A.	...	8	8	...	8	8	...
Cuttack.			(*b*) *Revisional.*				
Boundary disputes ...	14	11	25	12	8	20	5
Section 40 ...	99	960	1,059	...	...	...	1,059
Do. 103A ...	29,488	29,885	59,373	27,806	29,617	57,423	1,950
Do. 106 ...	...	1,953	1,953	...	379	379	1,574
Do. 108 ...	...	3	3	...	1	1	2
Do. 108A ...	...	520	520	...	252	252	268
Balasore.							
Boundary disputes ...	6	1	7	6	1	7	...
Section 40 ...	1,392	153	1,545	29	450	479	1,066*
Do. 103A ...	24,243	442	24,685	24,240	437	24,677	8
Do. 106 ...	1,338	101	1,439	337	1,079	1,416	23
Do. 108 ...	5	8	13	5	8	13	...
Do. 108A ...	769	906	1,675	443	769	1,212	463

* Of these, 6 have been transferred to section 106 *bis*.

APPENDIX III.

PART D.

Progress in settlement of Land Revenue during the year ending 30th September 1910.

Name of estate or tract under settlement.	Total area.	Total existing assets.	Total new assets.	New Land Revenue settled during the year.				Total cost and cost rate.		
				Area.	Existing Land Revenue.	New Land Revenue.	Percentage of difference, + or—	Total costs incurred on area in column 5.	Cost rate per square mile according to sanctioned estimate.	Actual cost rate per square mile, columns 9÷5.
1	2	3	4	5	6	7	8	9	10	11
		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.
Hooghly : 2 Government Estates.	2 acres	23	25	2 acres	23	25	+14	60	0-8-6 per acre	0-8-6 per acre.
Hooghly : 16 Temporarily-settled Estates.	126 "	633	633	160 "	560	496	—11			
Sambalpur Mahal ...	2 Sq. M	207	275	2 Sq. M.	207	273	+34	186	185	78

PART E.

Results of Appeals during the year ending 30th September 1910.

Name of estate or tract under settlement.	Nature of case.	Pending from previous year.	Instituted during the year.	Disposed of during the year.	Balance pending.	Results of appeals (column 4).			
						Decisions—			Cases returned for re-trial.
						Upheld.	Modified.	Reversed.	
1	2	3	4	5	6	7	8	9	10
				I.—Land Revenue Settlements.					
				(a) *Government and Temporarily-settled Estates.*					
Midnapore.									
Jalamutha, Majamutha and other estates.	Section 104	362	503	663	2	330	85	217	31
	Section 46 ...	142	...	6	136	6	...	...	...
Sambalpur Mahal ...	Claim to hold nazul land free of assessment.	...	1	1	...	1	...	...	...
				II.—Other Settlements.					
				(a) *Original.*					
Birbhum.									
Rampur Hat (Sonthal villages).	Boundary disputes ...	...	10	9	1	7	...	...	2
Midnapore.									
Jamirpal	Section 105	23	...	23	...	23	...	...	...
Dighadari	Section 105	23	...	23	...	20	...	12*	...
Nayabasan and Rohini ...	Do. 105	296	...	296	...	288	3	1	4
	Do. 106	68	...	68	...	38	...	3	...
Hooghly : Zamindari estates.	Section 105	133	69	127	94	34	1	...	73†
	Do. 106	64	6	50	19	11	15	21	...
	Do. 109C	...	1	...	1	...	...	...	...
South Bhagalpur ...	Section 105 (B. T. A.)	97	6	39	..	15	6	3	...
	Do. 106 (B. T. A.)	6	17	13	...	13	...	...	...
	Do. 40 (B. T. A.)	...	99	98	1	93	4	...	1
South Monghyr	Boundary disputes ...	7	...	7	...	...	...	...	...
	Section 40 (B. T. A.)	53	334	76	310	62	16	...	3
	Do. 105 (B. T. A.)	...	179	173	3	125	20	11	6
	Do. 106 (B. T. A.)	...	15	13	2	8	...	3	2
	Do. 108 and 108A (B. T. A.)	...	16	16	...	...	...	16	...
Patna district	Boundary disputes ...	1	1	2	...	...	...	...	...
	Section 40 (B. T. A.)	67	67	85	69	...	85	...	...
Shahabad district ...	Boundary disputes (...	...	240	237	3	216	20	1	...
Sonthal Parganas.									
Zamindari estates, 3rd programme.	Appeals in objections under section 24, Regulation III of 1872.	361	354	575‡	...	498	23	69	25
Puri.	Revision	202	261	463	...	373	27	67	16
Parikud	Section 105	...	1	1	...	1	...	...	...
	Section 106	20	...	20	...	6	...	20	3
	Section 40 (S. T. A.)	57	67	55	69	...	55	...	...
Chota Nagpur.									
Ranchi	Boundary disputes ...	19	...	10	...	6	2	2	...
	Section 61 C. N. T. A. (First appeal).	...	10	9	1	8	1	...	...
	Section 61, C. N. T. A. (Second appeals).	3	1	4	...	4	...	...	...
Manbhum.									
Barabhabhum	Boundary disputes ...	23	...	12	...	14	...	8	...
	Section 61, C. N. T. A.	...	1	...	1	...	...	...	...
Pakhum	Boundary disputes ...	...	35	25	10	22	1	1	1
Hazaribagh district ...	Boundary disputes ...	...	128	126	26	113	15	8	...
				(b) *Revisional.*					
Cuttack	Section 105	...	3	...	3	...	...	...	...
Balasore	Do. 105	5	67	46	6	44	1	2	6‡
	Do. 106	2	24	22	14				
	Do. 105A	3	...	3	...	...	...	3	...

* This refers to one village.
† This is for a group of cases under section 105, rejected by the former settlement officer as the plaints were not signed and verified.
‡ 15 cases dismissed for defaults, etc.

APPENDIX IV.

Statement showing the nature and number of holdings recorded in each settlement during the year ending 30th September 1910.

Name of estate or tract under settlement.	Number of ryotian recorded in the name of—												
	Proprietors.		Tenure-holders' cultivating possession.	Ryots at fixed rates or fixed rents.	Settled ryots.	Occupancy ryots.	Non-occupancy ryots.	Rent-free holders.		Unoccupied.	Government.	Total.	Under-ryots.
	At private lands.	Not at private lands.						Service tenure.	Other.				
1	2	3	4	5	6	7	8	9	10	11	12	13	72
						(a) *Original.*							
Hoochly: Zamindari Estates.	...	42	31	307	5,825	69	264	62	1,850	64	11	8,625	661
South Mowhyt ...	...	45	27	3	3,764	...	12	121	55	186	19	4,231	308
Pâtna district ...	19	14,216	4,192	1,887	8,1,,918	121	886	6,206	2,589	36,370	1,281	3,72,987	62*
Shahabad district	20	5,144	725	45,041	50,240	56	104	1,410	2,662	2,965	46 1	1,16,374	1,744
Cuttack: Khiji a Bishonpur.	39	9	50	33	3,096	1	101	30	866	84	1	3,930	1,139
						(b) *Revisional.*							
Cuttack	2,807	14,034	30,067	74,301	2,27,713	4,125	5,943	2,227	24,142	74,039	1,712	3,53,971	26,726
Balasore	226	1,020	1,726	2,033	31,413	26	25	155	2,302	725	66	38,925	2,118

* With occupancy right; 6,966 without occupancy right.

APPENDIX V.

Showing the progress made in Recovery of Costs during the year ending 30th September 1910.

Division.	District.	Estate or tract under settlement.	Demand.			Collections.							Balance.		
			Landlords' share.	Occupiers' share.	Total.	Landlords' share.			Occupiers' share.			Grand Total collected.	Landlords' share.	Occupiers' share.	Total.
						Voluntary.	By certificate.	Total.	Voluntary.	By certificate.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Burdwan ...	Hooghly	Zamindari estates	1,679	2,728	4,407	1,679*	...	1,679*	1,106	...	1,106	2,785	...	1,617	1,617
Ditto ...	Midnapore	Hayabanna ...	4,119	6,305	10,425	3,795	...	3,795	2,736	...	2,736	6,530	323	147	470
		Rohini	1,939	2,921	4,861	1,651	...	1,651	2,424	...	2,424	4,165	289	23	312
Bhagalpur ...	Bhagalpur	South Bhagalpur	1,38,740	1,97,266	3,30,006	1,04,308	23,137	2,06,845	1,25,444	669	1,26,113	3,32,958	16,308	1,411	17,719
Ditto ...	Monghyr	Monghyr South Monghyr ...	4,00,856	1,41,223	5,30,815	2,14,474	12,613	2,24,087	1,13,259	290	1,13,446	4,56,535	24,609	1,799	26,408
Ditto ...	Santhal Parganas	1st Programme ...	23	.....	23	...	23	...	...	...	...	23†	...	...	...
		2nd Programme ...	13,726	.....	13,726	...	6,625	6,625	...	...	...	6,625‡	7,101	...	7,101
		3rd Programme ...	1,17,630	.....	1,17,630	73,009	21,799	94,809	...	...	...	94,809	22,811	...	22,811
Orissa ...	Puri ...	Parikud	3,915	.....	3,915	...	2,764	2,764	...	...	...	2,764	951	...	951
Chota Nagpur	Ranchi ...	Ranchi District ...	69,935	41,592	1,11,507	46,016	2,752	48,767	41,544	68	41,592	1,10,119	1,248	...	1,248
Ditto ...	Singhbhum	Dhalbhum Estate	56,064	31,007	1,3,36,721	31,513	800	32,408	50,868	127	50,995	1,33,403	2,554	73	2,627

* Deposited in advance.
† Rupees 1,942 refunded to proprietors on account of excess deposit.
‡ Out of this, a sum of Rs. 5,945 is due from Government for re-settlement of certain minor Government estates.

APPENDIX VI.

PART A.

Statement of some sales during the past ten years of Proprietary Rights collected during attestation in the year ending 30th September 1910.

Name of estate or tract under settlement.	Area under attestation during the year.	Area of villages in which statistics were collected.	Number of estates in the selected villages.	Sales of estates or portions of estates.			Whether the purchaser belongs to the class of—			
				Number of sales.	Land revenue transferred.	Price paid.	Landlord.	Raiyat.	Mahajan.	Lawyer.
1	2	3	4	5	6	7	8	9	10	11
	Sq. M.	Sq. M.		*Original Settlements.*		Rs.				
South Monghyr ...	29	29	.....	9	37	3,675	3	...	...	1
Patna District ...	1,133	1,133	5,534	220	10,336	9,57,405	154	67	9	.....
				Revisional Settlements.						
Shahabad District ...	330	330	Not available.	46	5,676	3,49,766	21	11	13	3
Cuttack	1,313·36	1078	1,971	261	30,584	1,74,855	221	11	13	1
Balasore	167·76	4·76	39	20	115	2,443	15	5	.....	.....

APPENDIX VI.

PART B.

Statement of mortgages during the past ten years collected during attestation in the year ending 30th September 1910.

Name of estate or tract under settlement.	Area under attestation during the year in acres.	Number of holdings attested.	Area, in acres, held by mortgagees—						Profession of mortgagees.							
			From proprietors.	From tenure-holders and under-tenure-holders.	From raiyats at fixed rates.	From settled raiyats.	From occupancy raiyats.	From non-occupancy raiyats.	Landlord.		Raiyat.		Mahajan.		Lawyer.	
									Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
						Original Settlements.										
South Monghyr ...	80,000	4,251	29	...	51·67	...	...	...	...	...	13	31	5	36	...	...
Patna District ...	732,120	279,607	4,235	249	490	18,076	393	1	2,627	2,807	19,256	15,127	508	662	89	133
						Revisional Settlements.										
Shahabad District	315,000	115,304	1,116·83	99·63	6,916·49	16,061·19	...	1·41	915	469·68	11,072	12,677·50	2,821	4,889·44	1,364	1,230·46
Cuttack	775,825	466,947	24·56	21·53	153·23	9,691·85	23·16	39·19	187	304·46	1,001	1,649·17	196	1,196·75	2	3·74
Balasore	66,866	31,721	3·71	14·97	39·41	89·16	...	...	1	1·83	31	61·36	17	29·14	1	3·32

APPENDIX VI.

PART C.

Statement of transfers of Occupancy Rights during the past ten years collected during attestation in the year ending 30th September 1910.

Name of district and settlement.	Area under attestation during the year in square miles.	Number of raiyati holdings attested.	Area of raiyati holdings attested in acres.	Number and area of holdings transferred.				Profession of transferees.								Number of raiyats who still occupy their lands—		Price per acre of area transferred.	
				Entire holdings.		Part holdings.		Landlord.		Raiyat.		Mahajan.		Lawyer.		On cash rents.	On produce rents.	Whole holding.	Part of holding.
				Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
								Original Settlements.										Rs.	Rs.
South Monghyr	79	4,631	13,974	23	5	67	23	20	3	47	49	2	1	...	...	...	...	...	...
Patna District	1,133	326,031	486,668	1,198	1,869	1,764	1,659	153	216	2,726	2,717	73	178	27	45	77	145	107	104
Shahabad District.	339	104,335	127,672	652	711	1,083	1,263	119	293	1,200	1,205	330	423	40	48	...	...	207	214
								Provisional Settlements.											
																		Rs.	Rs.
Cuttack ...	1,212·24	486,145	240,454	11,338	9,230	28,991	19,216	4,014	3,115	20,281	20,533	5,240	5,372	774	737	...	...	47	49
Balasore ...	107·74	31,721	40,139	236	219	1,109		154	409	1,113	1,304	362	508	1	40	...	...	29	31
								Experimental Maintenance.											
																		Rs.	Rs.
Balasore ...	890·26	126,725	230,373	1,071	230·17	5,402	2,513·69	263	254·01	3,875	1,754·07	1,235	1,154·38	21	12·80	2	23	42	50

APPENDIX VII.

(*See* Chapter IV of the Report.)

Showing Mutations in Tenants' Rights for the year ending 30th September 1910.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total area of the estate in acres.	Total number of tenancies.	NUMBER OF MUTATIONS REGISTERED.										Percentage of mutations to total number of tenancies, col. 9 (a) ÷ (b) or col. 4.	Total area in acres transferred.	Average price per acre of land sold.
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	b	a	b	a	b	a	b	a	b			
Burdwan Division.																
Midnapore	3 estates	60,595	18,510	49	90	126	9	...	...	1	...	175	105	2·09	318·03	328 to 553
Patna Division.																
Patna	41 estates	33,281	6,923	35	99	200	10	1	14	3	1	477	125	8·5	553·27	20 to 223
Gaya	7 „ „ ...	50,594	4,317	26	18	229	15	6	3	...	1	283	39	6·6	1,309·56	77
Shahabad	16 „ „ ...	11,389	1,290	9	7	53	...	...	...	...	...	62	7	5·25	450·2	60
Tirhut Division.																
Saran	Mudha	382	233	...	...	...	...	...	1	...	1	...	2	·32	·20	...
Do.	Makdhumganj ...	223	120	1	...	13	...	3	...	...	...	17	...	14·16	3	53
Do.	Sangra	1,089	214	1	3	15	90	...	1	...	...	16	94	39·53	225	125
Darbhanga	Bakhtiarpur ...	1,110	499	16	...	7	...	...	...	...	...	23	...	4·6	·39·23	...
Bhagalpur Division.																
Monghyr	Diara and other estates.	60,764	9,673	123	133	193	46	6	3	1	...	320	170	4·9	1,416·19	25 to 300
Bhagalpur	8 estates	35,437	1,926	19	...	29	...	...	...	...	...	29	...	1·05	652·67	15 to 80
Purnea	2 Estates	7,983	1,075	6	...	1	1	...	...	...	...	6	1	·65	32·29	10
Darjeeling	Terai Jotes	134,376	845	2	99	15	134	...	...	1	7	18	240	30·53	5,859·76	30
Ditto	West Tessta Khas Mahal.	15,096	1,888	10	...	5	...	...	...	...	...	15	...	1·05	160·80	30
Ditto	Kalimpong Government estate.	214,216	5,982	105	33	136	4	5	3	39	12	339	62	6·19	2,909·19	40 to 100
Sonthal Parganas* ...	Damin Tauzi No. 609	250,240	965	...	...	7	...	...	...	...	...	7	...	·71	3·94	...
Ditto	Sahebganj Tauzi No. 540,	703	3,239	16	17	1	...	...	...	...	...	17	17	1·03	9·14	1,115
Ditto	10 other estates ...	1,083	552	4	...	26	...	...	...	...	...	30	...	3·49	47·67	21 to 1,971
Orissa Division.																
Cuttack	Banki...	75,030	26,179	245	907	552	257	93	451	5	8	994	2,363	12·56	695	125
Do.	Town Khas Mahal...	726	1,908	55	4	47	2	...	2	2	6	104	14	6·15	22	2,000
Balasore	Nayananda Bhoo...	17,787	11,572	7	41	1	...	...	...	...	...	8	41	·43	46·17	30
Do.	Chandbali	178	180	2	1	2	...	...	1	...	...	4	2	3·3	2·35	200
Angul	Angul	579,327	31,781	...	...	2,924	1,562	...	...	2	2	2,926	1,567	14	13,084·05	...
Puri	Khodhar	5,577	787	78	26	2	...	...	...	...	...	77	26	13·63	104·23	45
Do.	Balukhand ...	574	260	2	2	...	...	...	...	...	...	2	2	1·54	1·55	...
Sambalpur	Malgutari	130,910	6,907	46	73	129	8	...	14	6	6	176	101	4·07	3,747·25	85
Ditto	Thikadari	564,977	27,967	313	558	369	64	6	205	33	43	1,181	969	6·39	17,626·86	240
Ditto	Saiparawari	7,001	268	...	...	9	...	...	...	...	...	9	...	4·26	13·64	...
Ditto	Zamindari	995,798	34,148	312	493	481	29	14	99	13	4	820	625	3·28	14,971·21	115
Chota Nagpur Division.																
Hazaribagh	Kodarma	35,460	2,995	...	...	177	6	...	...	...	2	177	8	6·27	1,112·97	...
Palamau	Palamau and Naldehri.	972,097	16,983	23	9	955	565	5	14	3	2	1,016	570	9·50	23,223·53	118
	Total ...	3,635,356	2,16,613	1,469	2,729	7,437	3,373	157	813	108	94	9,174	6,890	7·41	90,973·49	15 to 2,000

* Headman system obtains.

APPENDIX VII—*concluded.*

WARDS' ESTATES.

Division and District.	Estate.	Total area of the estate in acres.	Total number of tenancies.	Number of mutations registered.										Percentage of mutations to total number of tenancies, col. 9 (a)÷(b) on col. 4.	Total area in acres transferred.	Average price per acre of land sold
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	b	a	b	a	b	a	b	a	b			
Burdwan Division.																
Midnapore *	Kuhikri	21,608	5,857	73	105	208	3	4	1	...	3	287	113	6·70	762·23	60
Ditto	Pachotgar	303,146	46,750	14	...	12	...	...	...	...	...	26	...	·005	24	100
Patna Division.																
Gaya	Maksudpur ...	77,294	5,521	93	39	66	5	...	4	...	...	163	53	2·3	338·46	14
Do.	Deo Raja and Deo Rani's Estates.	61,764	9,736	15	60	294	...	39	45	...	...	336	105	4·3	637·2	25
Tirhut Division.																
Saran	Hathwa	600,000	99,196	443	267	1,880	225	29	276	13	1	2,457	969	3·6	1,389·16	66
Do.	Chaustria	5,816	2,411	...	1	...	...	...	...	...	...	...	1	·04	·5	150
Do.	M. Hussain ...	1,985	340	...	3	...	...	3	...	...	...	3	3	2·2	1·25	200
Do.	Khojwa	13,308	6,694	1	7	1	...	...	...	...	...	2	7	·1	1·7	200
Muzaffarpur and Champaran.	Bettiah	1,974,638	336,753	180	202	2,558	...	...	83	...	...	2,737	285	1·3	...	...
Muzaffarpur	Mathia	30,422	5,883	78	142	190	1	3	50	2	...	264	193	3·13	706·23	115
Ditto	Tarkahi	8,260	2,627	33	46	169	...	...	5	...	...	202	51	5·1	62·5	100
Ditto	Surauni (No. 1) ...	14,826	6,572	...	4	...	...	...	...	...	...	...	4	·06	2·22	100
Patna Darbhanga, Muzaffarpur and Monghyr.	Narhan	68,972	23,461	46	124	96	...	3	2	1	3	147	130	1·1	613·36	·62
Bhagalpur Division.																
Monghyr	Ratan	5,154	6,135	125	8	1	...	...	2	...	...	126	10	2·2	440 58	22
Ditto	Bahadoorpur ...	61,646	9,159	499	111	9	1	3	6	...	1	492	121	6·01	1,538·60	17
Ditto	Shakarpura	9,725	2,315	27	34	1	...	...	...	...	...	28	14	2	151·21	75
Ditto	Chapraon	14,976	4,289	35	13	2	...	...	...	...	...	40	13	1	289·71	75
Bhagalpur	Panjwara	21,546	1,838	11	6	...	...	...	1	...	...	11	7	1	388·54	65
Ditto	Murho	5,894	2,214	93	...	62	...	...	...	...	...	84	...	3·79	340	50
Ditto	Lagma	7,350	1,779	6	22	5	...	...	5	...	...	14	27	2·3	11·5	40
Ditto	Sonbarsa	6,904,475	14,705	113	...	...	...	...	...	...	...	113	...	·75	219·76	15
Ditto	Shahpur	7,009	1,457	7	13	3	...	2	5	...	1	11	19	2·1	93	40
Ditto	Barari	26,913	25,021	60	...	385	...	...	3	...	...	388	3	2·3	46	15
Santhal Parganas ...	Rohini	33,536	4,074	19	...	1	...	1	...	1	...	22	...	·53	19·15	215
Ditto	Gamaria	16,573	189	...	...	1	...	...	...	...	...	1	...	·15	312·05	...
Ditto	Pakaur	15,913	11,773	78	126	3	...	...	...	3	3	84	126	1·7	183	20
Orissa Division.																
Cuttack	Dompara	33,469	8,456	17	167	13	9	...	1	...	...	30	177	2·42	139·49	62
Do.	Darpan	68,727	23,709	153	1,426	...	...	...	...	...	8	153	1,427	5	1,441·29	62
Puri	Dalang Mauzabad ...	6,619	5,796	26	40	1,302	...	...	26	...	...	1,330	66	18·3	1,521·78	24
Do.	Sarbarahkuni ...	37,601	362	1	13	73	...	...	15	...	...	74	27	25·5	...	...
Do.	Sarbarahkuni Tenures Garh Ghorahlah and Kaipara.	2,621	2,544	10	23	615	...	...	...	...	...	625	23	25·6	759·77	134
Do.	Parlakot	35,484	6,086	1	1	...	...	...	...	...	...	1	1	·03	2·79	20
Chota Nagpur Division.																
Ranchi	Janampiri	1,664	205	1	...	6	...	...	...	...	...	7	...	3·4	...	...
Do.	Joria	17,681	1,278	...	...	3	...	...	...	...	...	3	...	·2	...	...
Do.	Sanabata	9,754	65	1	...	...	...	...	...	...	...	1	...	·1	...	...
Do.	Siri	1,446	712	1	...	...	...	...	...	...	...	1	...	·1	...	...
Do.	Surindih	17,147	455	...	...	28	...	...	...	...	...	28	...	6·6	...	...
Do.	Jamudag	1,530	246	...	...	4	...	...	...	...	...	4	...	1·6	...	...
Do.	Mardhan	13,998	467	...	...	8	...	...	...	...	...	8	...	1·6	...	...
Do.	Sarjamdih	7,736	674	1	...	...	...	...	...	...	...	1	...	·1	...	...
Do.	Biru	626,096	8,486	1	...	...	...	...	...	...	...	1	...	·4	...	...
	Total ...	2,946,813	588,334	2,105	2,767	8,066	245	148	554	24	11	10,345	3,027	2·4	17,154·46	19 to 600

* Jhargram is omitted as being under settlement.

† Headman system obtains.

APPENDIX VIII.

[See Chapter IV of the Report.]

Showing Re-settlement of Vacant Tenancies during the year ending 30th September 1910.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RE-SETTLED DURING THE YEAR.		VACANT TENANCIES RE-SETTLED DURING THE YEAR.	
		Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6
Patna Division.					
Patna	Government Estates	198	3·1	193	2·9
Gaya	Ditto ...	111	284·65	106	276·01
Shahabad	Ditto ...	3	1·5	...	...
Tirhut Division.					
Darbhanga	Bukhtiarpur ...	1	2·8	...	...
Bhagalpur Division.					
Monghyr	Town Khas Mahal	5	·1	3	·05
Bhagalpur	Bhagalpur Diara Tauzi No. 346.	10	35	2	24·64
Purnea	Belwa Harinkhori	1	2·55	1	2·55
Darjeeling	Kalimpong Khas Mahals	20	106·32	8	13·43
Sonthal Parganas ...	Gopikandar ...	1	·15	...	...
Orissa Division.					
Cuttack	Banki ...	...	...	96	43·51
Balasore	Nayamanda Birso...	1	0·97	...	...
Angul	Angul ...	783	1,940·48	686	1,504·67
Sambalpur	Malguzari ...	1	9·08	7	17·81
Ditto	Zamindari ...	29	251·32	10	123·94
Chota Nagpur Division.					
Hazaribagh ...	Kodarma ...	8	13·33	8	13·33
Palamau	Palamau and Baldehiri.	628	2,258·87	622	2,445·64
	Total ...	1,800	5,510·22	1,642	4,523·48

APPENDIX VIII—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RE-SETTLED DURING THE YEAR.		VACANT TENANCIES RE-SETTLED DURING THE YEAR.	
		Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6
Burdwan Division.					
Midnapore	Pachetgarh ...	42	49	7	6
Do.	Nayagram ...	77	91·63	23	27·07
Patna Division.					
Gaya	Maksudpur ...	199	804	69	204
Do.	Deo Raja's and Deo Rani's Estates.	40	205·2	14	127·12
Tirhut Division.					
Saran	Hathwa ...	1,428	2,392·65	1,027	2,137·5
Do.	Chautaria ...	8	36·25	...	...
Do.	M. Hussain ...	1	6·35	...	...
Do.	Khojwa ...	9	10·68	1	3·81
Muzaffarpur and Champaran.	Bettiah ...	801	1,107·85	960	1,459·93
Muzaffarpur ...	Mahtha ...	70	54·28	34	13·92
Ditto	Tamkohi ...	46	182·24	8	22·2
Ditto	Sursand (No. 1) ...	...	...	2	·87
Patna, Darbhanga, Muzaffarpur and Monghyr.	Narhan ...	270	467·43	144	200·47
Bhagalpur Division.					
Monghyr	Ratan ...	200	87·1	23	149·6
Do.	Bahadurpur ...	890	3,398·14	108	356·94
Do.	Shakerpura ...	95	556·92	10	20·23
Do.	Chapraon ...	152	972·6	3	10·39
Bhagalpur	Panjwara ...	103	206·65	7	22·93
Do.	Lugma ...	3	7	3	7
Do.	Sonbarsa ...	248	590·30	122	457·36
Do.	Shahpur ...	1	2	1	2
Do.	Barari ...	91	33	31	19
Sonthal Parganas ...	Pakour ...	250	134	20	22
Orissa Division.					
Cuttack	Darpan ...	89	107·88	4	17·42
Puri	Delang (Hustabud Sarbarahakari).	4	·95	...	...
Chota Nagpur Division.					
Ranchi	Siri ...	...	...	1	·75
Do.	Lohatu ...	...	...	1	1·15
Do.	Biru ...	2	4·13	...	...
Do.	Armai ...	6	11·25	6	11·25
Do.	Parba ...	2	11·24	...	...
Do.	Taisar ...	36	132·63	...	...
Do.	Harmu ...	1	4·24	...	...
	Total ...	5,164	11,617·64	2,629	5,300·91

APPENDIX IX.

[See Chapter IV of the Report.]

Showing New Settlements of Waste Lands during the year ending 30th September 1910.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of new tenancies on new lands settled.	Total area of such tenancies.	REMARKS. (Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Burdwan Division.				
Midnapore ...	Ghatal Khas Mahals	29	·33	
Patna Division.				
Patna ...	Government Estates	593	585·67	
Gaya ...	Ditto ...	274	411·41	
Shahabad ...	Ditto ...	45	20·4	
Tirhut Division.				
Saran ...	Deopura ...	13	4·5	
Darbhanga ...	Bukhtiarpur ...	1	·009	
Bhagalpur Division.				
Monghyr ...	Town Khas Mahals ...	7	1·4	
Ditto ...	Diaras in Sadar Sub-Division.	1,822	2,978·17	
Ditto ...	Diaras in Begusarai Subdivision.	1	·04	
Ditto ...	Other estates in Sadar Subdivision.	2	·03	
Ditto ...	Taluqa Bhawanandpur	52	166·3	
Bhagalpur ...	Bhagalalpur Sadar and Banka, Tauzi No. 848.	1	2·69	
	Bhagalpur Diara Khas Mahal, Tauzi No. 346.	4	26·90	
	Khas Mahal Madhepura, Tauzi No. 2781.	2	99·40	
	Supaul Khas Mahal, Tauzi No. 3854.	1	7·57	
Purnea ...	Behra Harinkhori ...	156	1,003·92	
Darjeeling ...	Kalimpong Khas Mahals.	89	2,120·25	
Sonthal Parganas	Government Estates	10	9·60	
Orissa Division.				
Cuttack ...	Banki	24	17·90	
Angul ...	Angul	61	91·46	
Puri ...	Khurda ...	3	16·01	
Do. ...	Kodhar ...	2	·31	
Do.	Balukhand ...	5	1·42	
Sambalpur ...	Malguzari ...	91	140·94	
Ditto ...	Thikadari ...	175	155·43	
Ditto ...	Raiyatwari ...	10	46·15	
Ditto ...	Zamindari ...	261	375·57	
Chota Nagpur Division.				
Hazaribagh ...	Kodarma ...	19	32·63	
Palamau ...	Palamau and Beldehri	103	139·85	
	Total ...	3,856	8,456·05	

APPENDIX IX—*concluded*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of new tenancies on new lands settled.	Total area of such tenancies.	REMARKS. (Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Burdwan Division.				
Midnapore ...	Pachetgarh ...	15	7·3	
Do ...	Nayagram	72	52·75	
Patna Division.				
Gaya ...	Maksudpur ...	114	127	
Do. ...	Deo Raja and Deo Rani's Estate.	8	26·43	
Tirhut Division.				
Saran ...	Hathwa ...	480	1,145·98	
Muzaffarpur and Champaran.	Bettiah ...	1,273	1,153·32	
Muzaffarpur ...	Mahtha ...	61	27·61	
Patna, Darbhanga, Muzaffarpur and Monghyr.	Narhan ...	48	92·76	
Bhagalpur Division.				
Monghyr ...	Ratan ...	86	218·27	
Do. ...	Bahadurpur ...	245	566·97	
Do. ...	Shakerpura ...	21	49·56	
Do. ...	Chapraon ...	28	243·63	
Bhagalpur ...	Panjwara ...	18	388·54	
Do. ...	Lugma ...	2	2·37	
Do. ...	Sonbarsa ...	793	2,884·96	
Do. ...	Barari ...	77	110	
Santhal Parganas	Rohini ...	37	38	
Do. ...	Paksur ...	24	23	
Orissa Division.				
Cuttack ...	Darpan ...	249	94·70	
Puri ...	Delang-Hustabud Sarbarakari.	16	3·69	Rates enhanced as compared with last settlement.
Do. ...	Do. Sarbarakari tenures (Garh Ghoradia and Kalupara).	4	6·36	
Chota Nagpur Division.				
Ranchi ..	Jeria ...	1	2·73	
	Total ...	3,672	7,265·93	

APPENDIX X.

[*See* Chapter IV of the Report.]

Showing the results of the inspection of rent-rolls for the year ending 30th September 1910.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of villages in the estate.	Total number of tenants.	CHECK BY TAHSILDARS AND OTHER SUBORDINATE AGENCY.				CHECK BY MANAGERS AND OTHER SUPERIOR AGENCY.			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.
1	2	3	4	5	6	7.	8	9	10	11	12
Burdwan Division.											
Midnapore	Midnapore Government Estates.	66	1,839	66	1,839	100	...	...	...	...	...
Ditto	Majnamuths (Kukrahati circle).	186	11,389	186	11,389	100	...	186	11,389	100	...
Ditto	Ghatal Khas Mahals	10	106	10	106	100	...	3	34	32	...
Ditto	Kamlaschak ...	1	282	1	282	100	...	...	...	...	...
Presidency Division.											
Khulna	Chandkhali*	10	46	10	46	100	2	...	...	...	...
Do.	Mahammadabad* ...	5	189	5	189	100	5	...	...	...	...
Patna Division.											
Patna	Government estates	97	5,811	94	7,834	96	56	53	4,911†	79	36
Gaya	Ditto ...	100	9,049	100	8,000	99	55	76	1,838	36·4	...
Shahabad	Ditto ...	14	1,220	...	...	...	...	14	1,220	...	60
Tirhut Division.											
Saran	Mucha*	3	235	3	238	100	...	...	...	...	...
Do.	Mahadmeenagir* ...	3	120	3	120	100	...	...	...	...	...
Do.	Ramdaschak* ...	3	38	3	38	100	...	...	...	...	...
Do.	Bomora*	1	41	1	41	100	...	...	...	...	...
Do.	Kaithaulia*	1	7	1	7	100	...	...	...	...	...
Do.	Bangra*	9	215	9	215	100	...	...	...	...	...
Darbhanga	Bukhtiarpur* ...	5	409	3	409	100	...	...	...	...	...
Do.	Hardaspur* ...	1	1	1	1	100	...	...	...	...	...
Do.	Imadpotti	3	113	3	113	100	...	3	113	100	...
Bhagalpur Division.											
Monghyr	Town Khas mahal ...	19	1,640	17	1,130	68·2	53	13	165	10·05	25
Do.	Diara in Sadar Subdivision.	19	5,288	19	3,294	60·9	320	15	500	9·4	2
Do.	Diaras in Begmeral Sub-division.	5	691	5	300	45	95	5	121	18	...
Do.	Other estates in Sadar Sub-division.	18	736	18	633	84·9	27	13	75	10·1	4
Do.	Other estates in Begmeral Sub-division.	20	62	20	46	67·64	4	13	28	28	...
Do.	Taluka Bhowanandpur.	9	1,430	9	1,000	69	60	7	155	10	...
Bhagalpur	Railway 'B' Class land Tauzi No. 4575.	22	91	22	91	100	7	22	91	100	...
Ditto	Bhagalpur Diara Khas mahal.	3	1,500	3	1,500	100	102	3	1,500	100	...
Ditto	Bhagalpur Sadar Khas mahal & Banka-Madhupur Khas mahal.	3	29	3	29	100	3	3	29	100	...
Ditto	Amsaut Sarkar Madja	1	97	...	...	...	...	1	97	100	6
Ditto	Supaul Khas mahal ...	15	253	15	253	100	...	15	253	100	...
Darjeeling	Terai Jotes ...	845	3,309	327	1,324	40·28	27	151	456	14·21	9
Ditto	West Jeosta Khas Mahals.	21	1,338	21	1,338	100	...	16	1,139	80·6	...
Ditto	Kellipong Khas mahal.	48	5,938	48	5,938	100	28	9	917	15	12
Santhal Parganas...	Amsaut Sarkar Sarfarfazi.	1	155	1	130	100	12	1	45	35	6
Ditto	Amsaut Sarkar Madja	1	157	1	157	100	11	1	21	19·74	6
Ditto	Gridine Pachpur ...	3	73	3	73	100	3	3	17	23·61	1
Ditto	Jagirnath Mahlidar	1	16	1	16	100	3	1	10	66·66	2
Ditto	Sayedpur ...	1	82	1	82	100	4	...	...	...	...
Ditto	Nya Bazar	1	26	1	26	100	2	1	4	15·38	1
Ditto	Railway "B" Class land.	9	126	9	126	100	4	...	...	...	...
Ditto	Bijapur relinquished land.	1	6	1	6	100	...	...	...	...	...
Ditto	Sahibganj, Tauzi No. 566.	8	2,225	8	2,225	100	...	8	264	11·84	...
Ditto	Other Khas mahal Tauzi No. 117.	3	60	3	60	100	...	...	...	...	...
Orissa Division.											
Cuttack	Banki	144	23,916	134	12,982	56·1	501	115	3,943	16·5	797
Do.	Town Khas Mahals ...	35	3,151	35	3,151	100	46	35	783	23·83	...
Balasore	Bhadrak	1	1	1	1	100	...	...	...	...	...
Angul	Angul	693	31,781	693	31,280	98	635	107	6,169	19	36
Puri	Khordhar	18	727	5	727	100	...	...	...	...	...
Sambalpur ...	Khalsa	116	5,067	116	5,067	93	276	61	3,139	57	24
Ditto	Thikadari	811	87,967	811	86,772	97	3,059	374	12,014	34	346
Ditto	Rewaiward	15	256	15	193	94	9	4	81	32	...
Ditto	Zamindari	994	24,149	994	22,203	91	1,455	217	6,396	37	547
Chota Nagpur Division.											
Hazaribagh ...	Kodarma	101	8,896	88	1,946	15·71	165	67	670	32·1	...
Palamau	Palamau and Baldeobr	209	18,622	165	9,994	54·61	...	...	...	...	...

* Separate returns for columns 3 to 13 not furnished.

† Besides these, a large number of raiyat accounts were checked in 9 estates of the Dinapur Sub-division without consideration of any percentage.

APPENDIX X—*concluded.*

Wards' Estates.

Division and District.	Estate.	Total number of villages in the estate.	Total number of tenants.	Check by Tahsildars and other Subordinate Agency.				Check by Managers and other Superior Agency.			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.
1	2	3	4	5	6	7	8	9	10	11	12
Burdwan Division.											
Midnapur ...	Mayagram	96	5,897	96	5,897	100	...	96	5,215	37·1	...
Patna Division.											
Gaya	Makundpur	93	8,251	80	6,122	96	46	81	461	7·6	6
Do.	Deo Raja and Deo Rani's Estate*	65	9,226	...	...	...	...	90	8,565	92·6	...
Tirhut Division.											
Saran	Hathwa	1,186	94,196	894	41,973	44·6	1,030	677	28,675	30·7	849
Do.	Chamaria	96	2,411	27	1,287	53·79	...	15	1,855	43	...
Do.	Mobarak Husain ...	3	349	3	170	48·7	...	3	100	28·6	...
Do.	Khajwa	40	4,554	20	1,000	21	...	15	700	15	...
Muzaffarpur and Champaran.	Bettiah	1,580	228,316	38	5,371	2·3	836	101	18,000	8·2	1,075
Muzaffarpur ...	Mahthat	96	5,853	18	2,670	45·9	56	...	...	...	...
Patna, Darbhanga, Muzaffarpur and Monghyr.	Narhan	126	23,451	126	23,451	100	1,738	65	2,639	11·2	231
Bhagalpur Division.											
Monghyr	Ratan	176	4,126	...	...	...	...	2	6	·1	...
Do.	Bahadurpur	41	9,139	...	...	...	...	20	185	2	...
Do.	Shahargurra	21	2,212	...	...	...	...	4	10	·5	...
Do.	Chapraun	163	4,899	10	21	·4	...	...	...	...	...
Bhagalpur	Panjwara	40	1,833	40	263	14·3	...	...	...	...	...
Do. ...	Murho	16	2,214	1	64	2·79	...	...	...	...	...
Do. ...	Lugma	23	1,770	23	200	11·3	...	...	...	...	...
Do. ...	Sonbarsa	122	15,705	12	4,574	8	...	...	...	...	...
Do. ...	Shahpur	27	1,407	27	150	10·6	...	...	...	...	...
Do. ...	Barari	696	25,001	696	25,001	100	...	...	4,127	16·5	...
Sonthal Parganas	Pakour	93	11,773	93	11,773	100	...	93	1,304	11·07	...
Orissa Division.											
Cuttack	Dompara	93	6,339	93	2,104	33·22	...	9	245	3·85	...
Do.	Darpan	373	23,789	300	19,374	81·39	1,536	93	600	2·45	230
Puri	Delang Hustabud ...	120	6,795	...	...	...	...	23	1,099	14·7	...
Do.	Do. Sarbarahkari	115	183	...	...	...	...	19	70	38	...
Do.	Sarbarahkari tenures (Garh Ghorodia and Kainpara.)	55	2,844	...	...	...	...	10	618	16	...
Do.	Parikud estate ...	65	6,005	65	6,005	100	...	30	800	13·1	...

* Papers prepared by gomastahs and patwaris and checked by manager.
† Separate figures not given for columns 9 to 12.

APPENDIX XI.

[*See* Chapter V of the Report.]

Result of Inspection of Boundary Marks during the year ending the 30th September 1910.

Division and District.	Total number of estates surveyed under the Survey or Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 2.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
GOVERNMENT ESTATES AND TEMPORARILY-SETTLED ESTATES.										
Burdwan Division.										
Burdwan ...	Not known	6	394	288	223	52	13	3	Rs 13.	...
Birbhum ...	3	3	14	14	13	1	...	1	Rs. 3-8 met from Government grant.	...
Bankura ...	9	9	38	38	38	...	...	1	Ans 12 met from contingency.	...
Midnapore ...	62	62	2,287	2,287	2,147	48	92	1	As 8.	...
Howrah ...	13	4	40	40	25	15	...	9	Rs. 23 Met from the head "Miscellaneous improvement."	...
Presidency Division.										
24-Parganas ...	34	33	3,344	1,894	1,700	11	183	7	Re. 1-2-6 realized from chaukidars.	...
Nadia	46	21	634	563	454	96	13	106	Rs. 70-6-6.	...
Murshidabad ...	100	73	868	583	548	6	29	7	.....	...
Jessore ...	2	2	28	28	26	2	...	...	.....	...
Khulna ...	55	42	308	273	232	23	18	2	Done by tenants.	
Patna Division.										
Patna	53	22	551	551	549	2	...	...	.....	...
Gaya	21	21	1,563	1,314	1,305	1	8	2	.....	...
Shahabad ...	31	62	887	781	761	3	17	53	Rs. 45-3.	...
Tirhut Division.										
Saran	23	8	311	311	298	13	...	13	.....	...
Darbhanga ...	3	3	97	97	95	...	2	...	.....	...
Bhagalpur Division.										
Bhagalpur ...	Not known	10	96	85	62	7	16	...	.....	...
Darjeeling ...	2	2	137	125	125	...	...	...	.....	...
Sonthal Parganas*	8	8	5,744	1,051	1,033	...	18	16	Rs. 17-15. Out of which Rs. 8-15 met from Settlement funds, and Rs. 9 realized from Frodhans.	...
Orissa Division.										
Cuttack ...	5,192	5,192	9,399	3,022	2,188	69	795	829	Cost borne by Settlement Department.	...
Angul	1	2	2,600	1,236	1,164	(a) 70	...	(b) 2	.....	...
Sambalpur† ...	1,986	1,858	57,909	57,909	57,795	109	5	109	.....	...
Balasore ...	(Accurate figures not available.)									
Chota Nagpur Division.										
Hazaribagh ...	2	1	64	64	51	13	...	...	.....	...
Ranchi ...	2	2	188	188	188	...	...	...	.....	...
Palamau ...	2	2	17,125	17,125	13,105	4,948	72	4,927	.....	...
Singhbhum ...	1	1	2,606	1,737	1,516	212	9	1	.....	...
Total ...	7,600	7,464	1,06,133	91,609	84,616	5,701	1,292	6,089		

* Surveyed under Regulation III of 1872.
† Surveyed under section 27 of the Land Revenue Act of the Central Provinces.
N. B.—The figures against "Total" in columns 3, 8, and 4 are not complete for want of figures in certain cases.
(a) Slightly. (b) Owing to land slips.

Division and District.	Total number of estates surveyed under the Survey or Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 2.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
Presidency Division.				WARDS' ESTATES.						
Murshidabad ...	2	2	22	23	23	...	...	...	.....	...
Patna Division.										
Patna	314	314	1,451	1,451	1,451	...	...	...	.....	...
Sahabad... ...	28	15	497	216	96	15	105	11	.....	...
Tirhut Division.										
Saran	347	347	12,308	7,873	7,103	639	131	321	Rs. 268-12 cost met by the estate.	...
Champaran ...	1,692	1,692	Not known	10,504	6,792	1,798	1,914	3,712	Rs. 5, 224-6. Met by the state.	...
Darbhanga ...	1	136	816	816	752	...	64	53	Rs. 73-9 met by the estate.	...
Bhagalpur Division.										
Bhagalpur ...	1	...	180	85	79	6	...	...	.....	...
Sonthal Parganas*...	6	6	1,555	746	705	2	39	23	Rs. 11-8 met from the settlement funds.	...
Orissa Division.										
Cuttack ...	2	2	591	415	388	...	27	2		
Chota Nagpur Division.										
Ranchi	39	39	1,591	1,591	1,591	...	...	...	.....	...
Total ...	2,452	2,553	18,961	23,719	18,979	2,460	2,280	4,121		
Burdwan Division.				ZAMINDARI ESTATES.						
Burdwan ...	Not reported.	72	51	256	254	...	2	...	.....	...
Birbhum ...	5	48	348	348	338	5	5	...	.....	...
Bankura ...	62	62	362	362	361	...	1	...	.....	...
Midnapore ...	...	65	230	230	220	10	...	5	Rs. 21-2.	...
Hooghly ...	11	19	534	534	534	...	...	...	.....	...
Presidency Division.										
Nadia	2	2	37	37	36	...	1	...	.....	...
Murshidabad ...	11	11	1,679	1,313	964	...	249	...	.....	...
Jessore	...	19	469	201	188	11	2	...	.....	...
Khulna ...	6	6	344	38	35	...	3	...	.....	...
Tirhut Division.										
Saran	5,494	5,494	Not known	2,136	1,796	276	64	...	.....	...
Champaran ...	Not known	Not known	Ditto	1,428	1,256	115	58	53	.....	...
Bhagalpur Division.										
Bhagalpur ...	2,763	2,747	6,796	4,814	4,792	1	21	3	Rs. 67 from contingency.	...
Sonthal Parganas* ...	469	469	14,463	4,902	2,779	33	2,091	2,072	Rs. 1,576-13-3. Out of this Rs. 1,513-8-3 was met from settlement funds and Rs. 62-5 realized from the Produce.	...
Orissa Division.										
Puri	488	488	Not available.	1,772	1,675	57	40	97	Cost borne by Settlement Department.	No prosecution.
Chota Nagpur Division.										
Ranchi	1	1	4,130	2,048	2,039	4	...	4	.....	...
Singhbhum ...	3	3	1,339	1,339	1,093	194	52	30	Rs. 5-8	...
Total ...	9,305	9,506	30,782	21,643	18,358	706	2,584	2,286		
Grand Total ...	19,337	19,628	1,56,876	1,36,976	1,21,963	8,867	6,166	13,475		

* Surveyed under Regulation III of 1872.

N.B.—The figures against "Total" and "Grand Total" in columns 5, 9, and 4 are not complete for want of figures in certain cases.

B. S. Press—15-12-1910—2750J—400—G. A.

ANNUAL REPORT

OF THE

DIRECTOR OF SURVEYS, BENGAL,

ON THE

SURVEY OPERATIONS IN BENGAL, (OTHER THAN CADASTRAL SURVEYS)

DURING THE YEAR

1909-1910.



CALCUTTA:
BENGAL SECRETARIAT BOOK DEPÔT.
1911.

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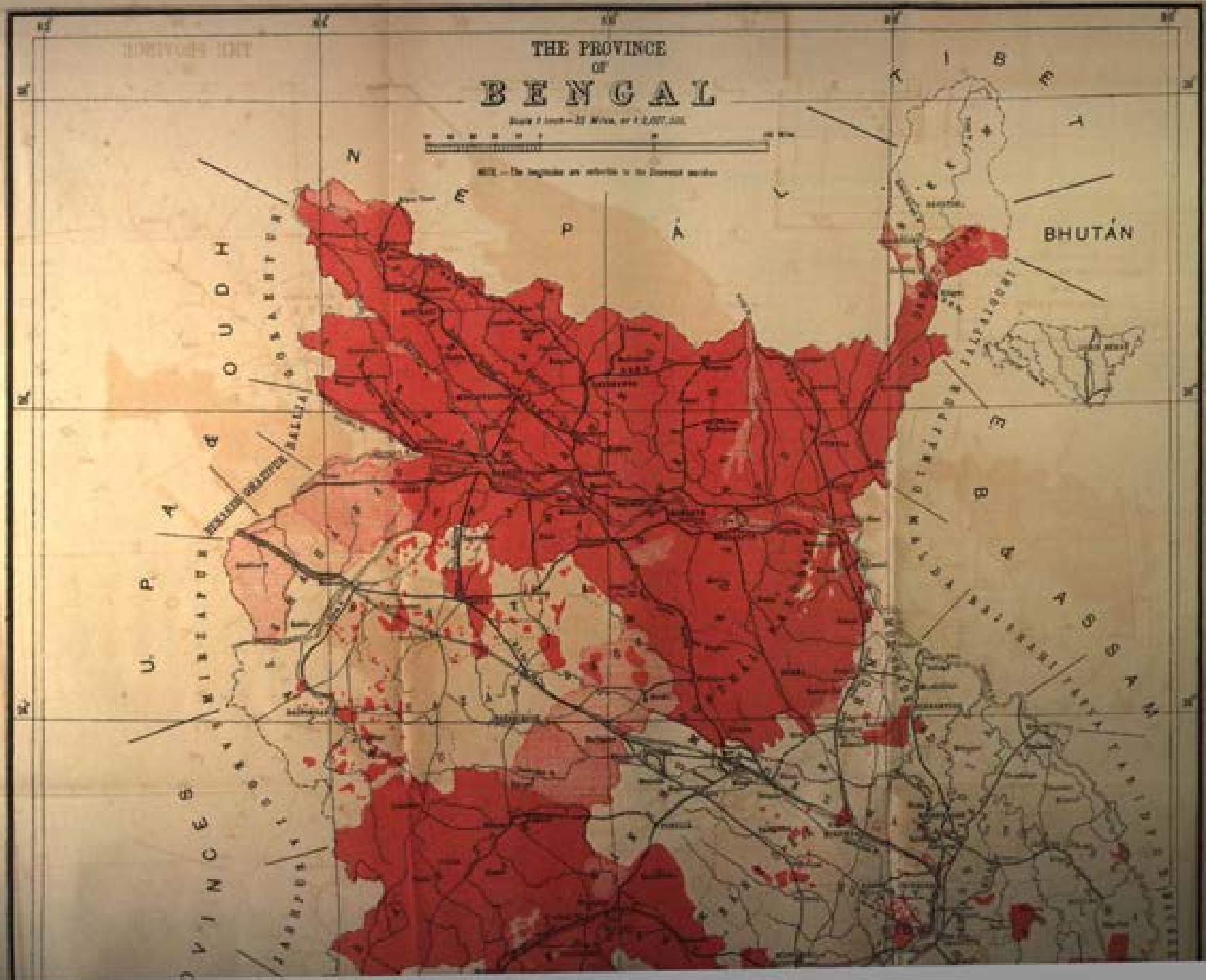
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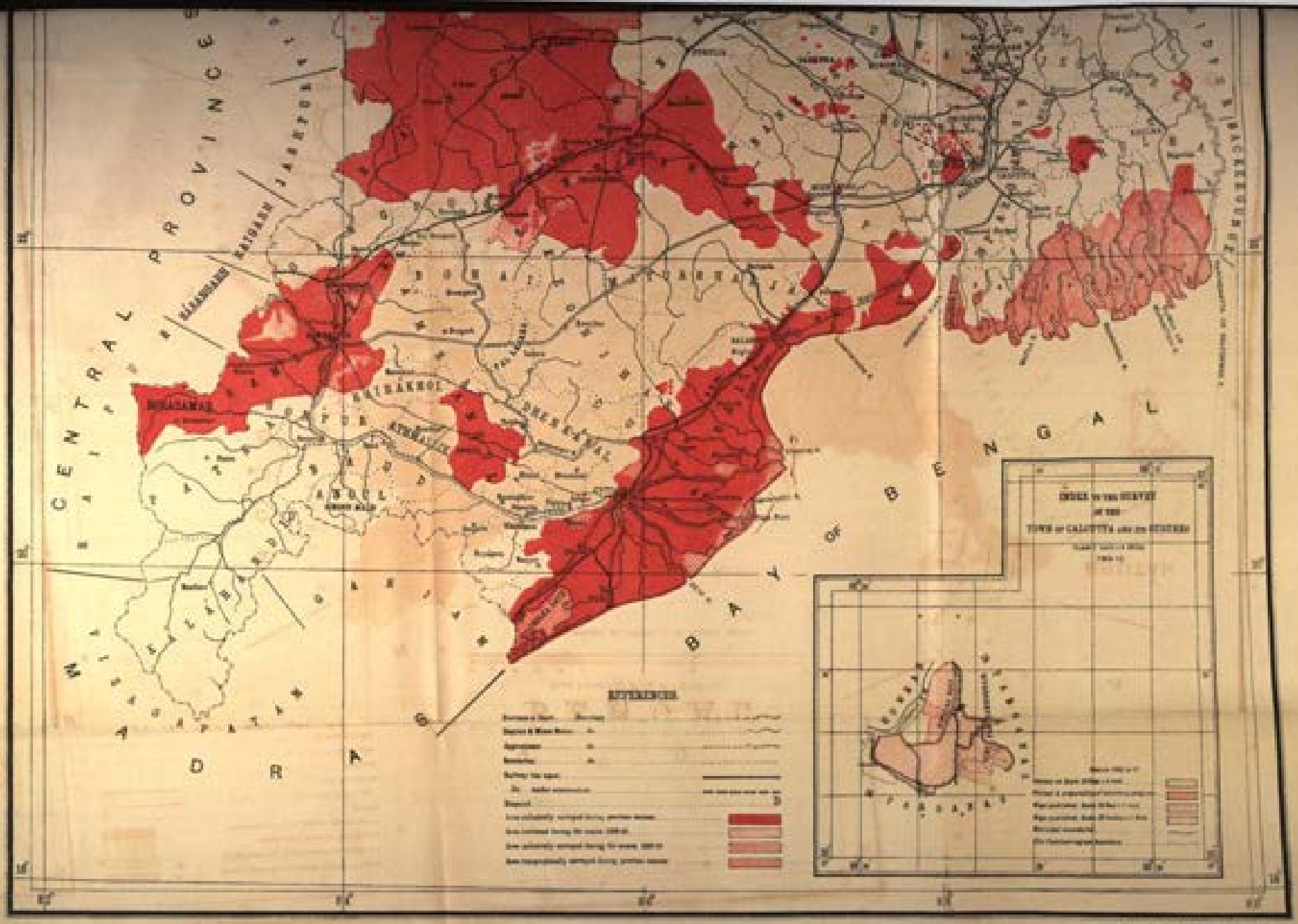
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SURVEY MAP




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BERAR
HYDERABAD
BOMBAY
MADRAS
BENGAL
BAY OF BENGAL
ARABIAN SEA
NAGPUR
AMRAOTI
AKOLA
BULDANA
WARDHA
CHANDA
WARDHA
YAVATMAL
WUNDA
NANDED
PARBHANI
BIDAR
GULBARGA
RAICHUR
KURNOOL
CUDDAPAH
NELLORE
GUNTUR
KISTNA
GODAVARI
VIZAGAPATAM
GANJAM
PURI
CUTTACK
BALASORE
MIDNAPORE
HOOGHLY
24 PARGANAS
CALCUTTA
HOWRAH
NADIA
MURSHIDABAD
BIRBHUM
BURDWAN
BANKURA
MANBHUM
SINGHBHUM
SAMBALPUR
KALAHANDI
KORAPUT
BASTAR
MANDLA
BALAGHAT
BHANDARA
CHANDA
WARDHA
YAVATMAL
WUNDA
NANDED
PARBHANI
BIDAR
GULBARGA
RAICHUR
KURNOOL
CUDDAPAH
NELLORE
GUNTUR
KISTNA
GODAVARI
VIZAGAPATAM
GANJAM
PURI
CUTTACK
BALASORE
MIDNAPORE
HOOGHLY
24 PARGANAS
CALCUTTA
HOWRAH
NADIA
MURSHIDABAD
BIRBHUM
BURDWAN
BANKURA
MANBHUM
SINGHBHUM
SAMBALPUR
KALAHANDI
KORAPUT
BASTAR
MANDLA
BALAGHAT
BHANDARA

No. $\frac{1637}{T.R.-7}$

From Lieutenant-Colonel R. T. CRICHTON, C.I.E., I.A.,
Director of Surveys, Bengal,

To the SECRETARY to the BOARD of REVENUE, LOWER PROVINCES.

Dated Dinapore, the 1st December 1910.

Sir,

I have the honour to submit my report on the Survey Operations in Bengal for the survey year ending 30th September 1910.

2. I held charge until 23rd April 1910 when, on my proceeding on six months' special leave, Captain R. Foster, I.A., Assistant Director of Surveys, officiated for me.

3. The outturn of 3,635 square miles of traverse survey is up to programme and exceeds the outturn of the previous year by 270 square miles.

4. It will be noticed that the cost-rates of the main traverse operations in districts Shahabad and Hazaribagh were Rs. 36·46 and Rs. 35·24 during the year under report, as compared with Rs. 34·6 and Rs. 33·5 of the foregoing year. The higher rate in Shahabad is to some extent due to more intricate traversing (a comparison of the figures of the two years show 1·8 sub-traverses to the square mile as against 1·3), but the main cause of the higher rate was the difficulties of transport in the large jungle tract of thana Bhabua. In Hazaribagh the higher rate is accounted for by the nature of the country and the consequent necessity of more stations to the square mile.

5. In paragraphs 92 to 95 of this year's report I explain what has been done in the experimental fixing of reference pillars for the Ganges Diara Scheme. The experiment is to be extended next season.

6. Few innovations of importance have been made during the year under report, but a good many improvements in details have been carried out.

A scheme for the organization of the clerical and menial staffs of the Bengal Survey Department has been worked out and is now under consideration of Government.

7. In paragraph 20 of last year's report I pointed out that, if savings were available, the work of substituting iron racks for the existing wooden ones in the Bengal Drawing Office would be undertaken. This work has now been completed. A part of the dismantled wooden racks have been re-erected in a separate building and the original traverse field-books of Bengal, 1,373 in number, have been stored in them, thus keeping them separate from the traverse volumes which are stored in the iron racks, so that if the one should be destroyed, it would be possible to obtain all traverse data from the other.

8. A large hand and power press and three graining machines have been received in the Bengal Drawing Office from England. The additional two horse power motor for working the graining machines will, it is hoped, be erected shortly and the electric wiring of the motor completed by the Public Works Department. When these machines start work, the graining staff will be considerably reduced.

A set of type for the Provincial Drawing Section of the Bengal Drawing Office has been received from England during the year, and the hand press that was received from the Survey of India has been transferred to the Chota

Nagpur Settlement, which has started its own map reproduction work. A photographer, a printer and a grainer were sent in November 1909 for three months to Ranchi to start map reproduction work there and train local men.

CHAPTER II.

PART I.—REPORTS ON SURVEYS IN TEMPORARILY-SETTLED AND GOVERNMENT ESTATES UNDER SETTLEMENT OF RENTS AND LAND REVENUE.

Nil.

PART II.—REPORTS ON SURVEYS IN PRIVATE ESTATES.

Shahabad District.

Traverse Survey.

9. The traverse programme, comprising thanas Kharghar, Mohania and Bhabua, was notified in Government Notification No. 2445L.R., dated 25th July 1909.

10. The total area of 1,650 square miles traversed includes 92 square miles of "diara" lands of thanas Shahpur, Dumraon, Buxar and Arrah. There were 2,287 villages in the area traversed.

11. The origin of survey was the same as that of last season, viz., the intersection of north latitude 25° 15′ with east longitude 84° 15′.

12. There were 31,805 new theodolite stations which were marked by 53 pucca pillars, 4,104 stone prisms, 15,872 clay cylinders and 2,059 pegs on boundary disputes; and in the hill and jungle tracts of thana Bhabua all stations have been marked with 6,691 local stones and 3,026 marks on rocks *in situ*.

Some of the old traverse stations of the 1882-83 and 1886-88 surveys in district Mirzapur and of the 1882-83 survey of district Benares have been found and utilized in the present survey.

13. The traverse work has been tied down by connections to five stations of the Great Trigonometrical Survey, and 193 azimuths have been observed and utilized for correction of angular work.

14. The season's work has been plotted on 2,593 sheets on the 16″=1-mile scale and on 14 sheets on the 4″=1-mile scale.

15. All the computations are complete in every respect. The 16″ plots and *khakas*, also original rough plots, have been despatched to the Settlement Officer except for 121 villages which require revision before the plots can be issued as these are over percentage in chaining owing to bad and hilly country. Also special 2″ reductions of the 4″ plots have been sent to the Bengal Drawing Office for reproduction and supply of 25 copies to the Settlement Officer. The Settlement Officer will utilize them as his working "mujmillia," thereby saving some tracing work.

16. In the cultivated area the demarcation was fairly well done, but in the southern half of thana Bhabua, which is chiefly hills and jungle, there was no demarcation of the village boundary. The attendance of the inhabitants was good except in the villages of the Maharaja of Benares situated in thana Bhabua; in these villages the Maharaja's agents were very obstructive.

Hazaribagh District.

Traverse Survey.

17. The traverse programme, comparising thanas Dumri-Pirtand, Giridih, Bengabad Kharagdiha, Dhanwar, Birni and Bagodar was notified in Government Notification No. 3344 L.R., dated 26th August 1909.

18. The area traversed was 1,813 square miles comprised in 2,755 villages.

The origin of survey was the same as that of last season, viz., the intersection of north latitude 24° 09′ and east longitude 85° 30′.

19. There were 48,316 new theodolite stations which have been marked with 472 old masonry platforms, 85 iron pegs, 42,665 local stones, 2,042 marks on rocks *in situ* and 3,052 pegs on boundary disputes.

20. Nine stations of the Great Trigonometrical survey and six hill stations of the Chota Nagpur Topographical survey have been connected with and 285 azimuths have been observed.

All the traverse station of district Monghyr, season 1906-07 and some of the stations of the Santhal Parganas of season 1901-02 were found and utilized after conversion of co-ordinate values.

21. All the computations are complete and the *khakas* have been despatched to the Settlement Officer except with respect to 92 villages which require revision before the plots can be issued, as these are over percentage in chaining owing to bad and hilly country. There are also 102 rough plots on the 4″=1-mile scale and 33 sheets of the 2″ reductions.

22. The difficulties in the survey, which have been considerable, may be summarised as follows:—(*a*) Apathy of the inhabitants in affording attendance and in pointing out boundaries, (*b*) incorrect lists of villages in the area for survey and (*c*) the very hilly nature of the country. There has been, however, a distinct improvement in the demarcation except in thana Bagodar, where very little was done, and that little, faulty.

23. *Parasnath Hill.*—The traverse survey was specially ordered by the Board of Revenue, Lower Provinces, in their letter No. 3710A, dated 13th August 1909. The Raja of Palganj is the propvietor of the hill, but at present it is managed by Government under the Chota Nagpur Encumbered Estates' Act.

24. Field operations started on the 7th September 1909 and were not brought to a close till the end of March 1910. This was due to very faulty demarcation of the hill, and to the intermediate line, which was cut under the orders of the Deputy Commissioner of Hazaribagh, not being completed till the 21st November 1909, also to the failure of the Forester in charge to point out the pillars said to surround the periphery of the hill, of which many could not be found, as no attempt had been made by the authorities to maintain the pillars in proper repair. Subsequent changes were made in the intermediate line, as it had been wrongly cut and there were found to be six boundary disputes instead of one as originally stated. Further the boundaries of the tea-gardens and orchards were wrongly demarcated and necessitated alterations in the traversing. It is to these reasons that the time taken to finally complete the traverse was lengthened and the expenditure increased.

25. The area of the hill is 22 square miles.

The work has been connected with the current work of the district.

There were 1,953 theodolite stations which have been marked with 31 masonry pillars, 1,542 local stones, 331 marks on rocks *in situ* and 46 pegs.

26. The area has been plotted on 25 sheets on the 16″=1-mile scale which include the villages that adjoin the periphery of the hill. This was done to guide the Settlement Officer in deciding the limit of the hill required for the purpose of the survey. There are also two sheets of 4″ rough plots.

Birbhum District.

Traverse Survey.

27. The survey was ordered in Government Notification No. 4160L.R., dated 23rd December 1909, and comprises portions of thanas Murarai, Nalhati, Rampur Hât and Mayureshwar.

28. The area traversed was 132 square miles comprising 103 villages.

29. The origin of survey adopted was the intersection of north latitude 24° 00′ and east longitude 87° 30′.

30. There are no Great Trigonometrical Survey stations near the area for connection, but the traverse work of season 1899-1900 in the Santhal Parganas runs along the whole length of its western boundary and it has been easy to tie the work down to its true geographical position. Azimuth observations were taken at 23 stations.

31. There are 2,537 new theodolite stations which have been marked by 116 stone prisms, 82 galvanized iron cylinders, 584 clay cylinders, 390 local stones, 19 marks on rocks *in situ* and 1,346 pegs.

The adjoining traverse stations of the 1899-1900 survey in the Sonthal Parganas have been connected with.

32. There are 191 sheets plotted on the 16"=1-mile scale and 9 sheets of 4"=1-mile rough plots. All the plots were made over to the Settlement Officer during the field season, as the detail survey followed the traverse in the same season.

PART III.—REPORTS ON MISCELLANEOUS SURVEYS.

Calcutta Surveys.

33. The following are the chief heads of the season's work:—

(*a*) Revision Survey of Calcutta Town.
(*b*) Completion of Revenue Maps of Panchannogram Government Estates.
(*c*) Completion of a wall map of Calcutta by Municipal Districts.
(*d*) Fair Mapping of the Town area.
(*e*) Fair Mapping of Revenue holdings in the town area.

Revision Survey of Calcutta.

34. This work is paid for in equal shares by Government and the Corporation. The portion of the work remaining over from last year, consisting of 24 sheets, was completed by the beginning of December. All field work done has also been inked up.

35. It has proved very difficult to keep the revision up to date, especially in the suburban areas which fall into sheets common to the town area. he work in these sheets has been stopped for want of funds. The principal changes occurring are:—

(*a*) Houses being demolished.
(*b*) Clearings shown blank on the maps being built over.
(*c*) Houses being built in tracts which were covered by gardens. It will be difficult to map these latter accurately without further traverse, owing to there being no points near from which to fix their position.

36. The Calcutta Improvement Trust Scheme is now before the Bengal Legislative Council, and when this comes into force, the maps which have been revised will soon be out of date.

37. The work of demarcation has not been as easy as I expected and reported last year. The owners registered in the office of the Collector of Calcutta are not the owners now in possession, consequently out of notices to 4,973 owners of holdings 50 per cent. had to be re-issued, and notices at the rate of 20 per cent. of this number had to be issued for information as to name of owner and revenue number of holdings. The Block plans have also not been kept up to date and do not show the subdivisions of holdings, and it has proved very difficult to identify them by the aid of the plans attached to the subdivision cases, the majority of which are mere sketches without scales. Some of the larger holdings have been subdivided into several portions and it has been found that, when holdings have been redeemed, the owners generally have no idea of their numbers.

38. The demarcation of the Southern Division of Calcutta, which was commenced on 4th October 1909, has been completed with the exception of a few holdings. The demarcation of the Northern Division was started in April and should be completed during the current financial year, if no very great difficulties present themselves. This division consists of 22 blocks and 8,692 holdings, nearly double as many as in the Southern Division, but has not given so much trouble. None of the blocks have been wholly completed, but 4,240 or nearly half the number of the holdings in the whole area have been finished.

39. Of the 32,376 municipal holdings in the two divisions, 21,816 fall within Revenue holdings and the balance within Sutanuty and Lottery

Committee lands. There are no maps showing the latter, only a register of names and addresses of owners, and the identifying of these holdings will entail a considerable amount of work, owing to the Corporation having changed the numbers of the holdings.

40. There are two sets of maps of Calcutta in existence: (*a*) block plans compiled from settlement operations of 1850-56 on the scale 100′ to 1″ and (*b*) Calcutta maps of the year 1887-92 on the scale of 50′ to 1″. The Block plans show all revenue holdings at the time of the settlement, but do not show the subdivision of holdings which occurred after that date. The measurements of the sides of holdings also do not always agree with those on the ground. They, however, are a useful guide for locating holdings, for, although the numbers of holdings do not agree with present possession, the general shape of the holdings agree. The Calcutta maps of 1887-92 do not appear to have been compared with the Block plans. They give the boundaries of municipal premises within which there are *pucca* buildings, but omit all boundaries of municipal premises in the uncongested area. The boundaries of holdings are not all shown, but those that are shown agree very well with present possession.

41. There are 248 boundary disputes preferred by owners in the Southern Division, of which 200 have been disposed of and the rest will be finished shortly. There are other disputes regarding lands which were originally drains, but have now been converted into lanes and included in adjoining holdings. This mater is at present under the consideration of the Commissioners of Calcutta.

42. The whole of the areas in the Southern Division have been proved and passed and only await the settlement of the disputes referred to in the preceding paragraph, to be closed. Those in the Northern Division are progressing favourably, the only delay being caused by the difficulty of obtaining the plans which are also constantly required in the field.

43. The attendance of owners has been fairly good. In the Southern Division the same property has changed hands several times, and it has been very difficult to trace the present owners. In the Northern Division the difficulty has not been so great, because most of the proprietors live on their own lands, and, in the cases where they do not, they have shown more interest in the accurate accomplishment of the work and have given valuable assistance.

44. *Revenue maps of the Panchannogram Government estates.*—This work has been completed. The proofs received from the Bengal Drawing Office were examined and the final printed maps despatched to the Collector of 24-Parganas and the Corporation of Calcutta.

45. *Calcutta wall map.*—District No. IV has been completed, and 150 copies of each sheet (instead of 300 copies as at first asked for) have been made over to the Corporation. Districts I, II and III, lying within the town area, will be taken in hand as soon as the fair sheets have been vandyked.

46. A vandyke copy of the sheets is being used for pentagraphing down the details, as, owing to numerous corrections, it is very difficult to follow the details on the original sheet, and it is liable to get destroyed by the pentagraph continually travelling over its surface.

47. *Fair mapping of the town area.*—The mapping of 187 sheets is well in hand, but the work is necessarily slow, as the changes now to be shown have to be taken from the revision work of the Survey of India Department (in the cases when the maps were not altered) as well as from last year's revision work. The maps of the Southern Division are ready for publication, but await the decision of the question of how to show the filled-up drains mentioned in a previous paragraph.

48. *Fair mapping of the Revenue sheets in the town area.*—The maps have not been commenced, as it has not been finally decided how the Revenue boundaries are to be shown. An experiment is being made to carry out the instructions of the Board of Revenue, Lower Provinces to surprint the Revenue boundaries in red on the municipal holdings maps, and these, when ready, will be submitted for approval.

JESSORE DISTRICT.

49. *Traverse Survey of Mokimpur Estate.*—The traverse of this estate was ordered in Government Notification No. 1883T.-R., dated 13th September 1909.

50. The estate comprises an area of 28 square miles consisting of 21 villages.

51. The origin of survey adopted was the intersection of north latitude 23° 15′ and east longitude 89° 15′.

52. There were 835 new theodolite stations which were marked with galvanized iron cylinders for all exterior trijunctions and pegs for all other stations. The tract being waterlogged, it was at first thought inadvisable to use the ordinary stone trijunction mark. The Settlement Officer subsequently marked all trijunctions with stone prisms as the detail survey followed the traverse in the same season.

53. Stations of the traverse survey in Faridpur district of Eastern Bengal and Assam were found and connected with.

One station of the Great Trigonometrical Survey was connected with and five azimuths were observed.

54. The area has been plotted on 44 sheets on the 16″=1-mile scale and there are 3 sheets of 4″=1-mile rough plots.

PATNA DISTRICT.

55. *Traverse of Diara Captain Peach and Bankipore Diara Block.*—This traverse was undertaken at the request of the Settlement Officer owing to a gap in the "diara" of the Ganges river which was omitted in the surveys of 1907-08 and previous seasons.

56. The area comprises 7 square miles and has been plotted on 11 sheets on the 16″=1-mile scale with one rough plot on the 4″=1-mile scale.

57. There are 140 new theodolite stations which have been marked by 20 stone prisms, one clay cylinder and 119 pegs.

58. The expenditure is included in the general operations.

24-PARGANAS DISTRICT.

59. *Traverse of Zone line around Palta and Dumkinsore Magazines, Ichapore.*—The traverse was taken up at the request of the Officer Commanding Presidency Brigade. A traverse was made of a 500-yard zone line round the two magazines.

60. The two blocks contain an area of 455 acres, and were plotted on seven sheets on the scale of 48 inches to one mile which have been made over to the Assistant Commanding Royal Engineer, Barrackpore.

61. The are 162 theodolite stations which have been marked by embedding burnt bricks.

Two azimuths were observed for correcting the angular observations.

62. *Relaying the boundary of Rangafala Estate.*—At the request of the Collector of the 24-Parganas the western boundary of the estate along the Hooghly river was relaid according to the Revenue Survey map of 1850.

63. Ten sites have been selected for pillars and have been marked by wooden pegs and earth mounds; these have been pointed out to the Subdivisional Officer at Diamond Harbour who has been requsted to erect masonry pillars.

64. A trace copy of the map with data has ben supplied to the Collector of the 24-Parganas.

ORISSA FEUDATORY STATES.

65. *Relaying the boundary between Dhenkanal and Athgarh Estates.*—This is a long standing boundary dispute which was decided by the Superintendent, Tributary Mahals, but not demarcated. The Political Agent requested that the boundary be demarcated and submitted a sketch map on the 2″ = 1-mile

scale and the records of the case, both in Uriya, without any references to old marks or trigonometrical stations that exist in the vicinity of the dispute.

66. Under these circumstances as the sketch was unintelligible it was returned to the Political Agent with a trace from the Ganjam and Orissa Topo. sheets Nos. 134 and 165 of 1851-54 and he was asked to mark the decision of the Superintendent on the trace. This was done.

67. On 1st December 1909 a surveyor was deputed who traversed the line and connected it with Kaplas Great Trigonometrical station and a topographical hill station of the East Coast Series. On completion of the traversing the Dhenkanal Agent accepted the eastern half of the line but disputed the western half which he contended should run two miles further south. The Agent for Athgarh disputed the whole line and stated that the boundary as given on the topographical map was correct, the land to the south of this line being in his possession.

68. The case was then returned to the Political Agent with a map showing the traversing done in accordance with the line as marked by him, and it was pointed out that, unless the dispute was settled by arbitration, it would be impossible to demarcate the boundary. This suggestion has been accepted by the Political Agent.

69. The length of boundary traversed was 21 linear miles.

70. There are 272 theodolite stations which have been marked with one stone, 19 marks on rocks *in situ* and 252 pegs.

Darjeeling District.

71. *Traverse Survey of Kurseong Municipality.*—The traverse survey was undertaken at the request of the Chairman of the Municipality.

72. The survey comprised 845 acres in one block and has been plotted on three sheets on the 16″ = 1 mile scale and the sheets have been made over to the Chairman of the Municipality.

73. There are 388 theodolite stations which have been marked with pegs. Azimuths were observed at four stations for correcting the angular values.

74. *Nepal Boundary.*—This work consisted of relaying the positions of reference pillars Nos. 2*2/e*, 34/*e*, 34/*f*, 62/*e* and 118/*e*.

75. The Subdivisional Officer, Kurseong, and a representative of the Nepal Durbar were present at the fixing of the pillars, and copies of the map and data were supplied to the former.

Nadia District.

76. *Relaying of the boundary between Rudrapur and Shankarpur, Char Nadaya.*—This operation, consisting of relaying the Revenue Survey boundary of 1854-55 between Rudrapur and Shankarpur and the thak map boundary of 1852 between Rudrapur and Char Nadaya, was ordered by the Board of Revenue, Lower Provinces, in Appeal Case No. 149 of 1907, as the line laid down by the kanungo could not be accepted in the absence of knowledge of the data employed by him in laying down the line.

77. In the first place the river Bhagirathi formed the boundary, of which both banks were demarcated according to the Revenue Survey map of 1854-55 and have been marked by 85 masonry pillars and 18 wooden posts.

78. In the second case the boundary as given on the thak map of 1852 was reduced by pentagraph and fitted, as nearly as possible, on the Revenue Survey map of 1854-55. Owing to the thak map being of thin country paper mounted on cloth and mutilated and torn, there was a certain amount of distortion. This boundary has been marked with 23 masonry pillars and 2 wooden posts.

79. The above two cases disposed of the points under contention in the appeal case, and the maps and papers were put up before the Settlement Officer when the agents of the Faikpara Raj stated that the boundary of Char Nadaya should be demarcated with respect to the *chittas* of the Bengali era 1211 (1804 A.D.) These *chittas* refer to an area of 593 bighas 17 cottahs 8 chitaks which was decreed in favour of Government in 1829, but there are absolutely no bearings or measurements recorded, and the tract being diara, without any

old marks, it was impossible to give effect to the request of the Paikpara Raj agents, who were therefore informed through the Collector that if they would demarcate the land according to the *chittas*, it would be traversed and mapped. This has been done and the case has been forwarded to the Board of Revenue, Lower Provinces, for final orders.

80. *Relaying boundary of Char Gayaspur.*—This work is the demarcation ordered by the Board of Revenue, Lower Provinces, of the eastern boundary of Char Gayaspur, adjoining mauza Gayaspur, according to the revenue survey of 1853-54.

81. The char is an island formed in the Bhagirathi river which has been taken possession of by Government.

82. The boundary was demarcated with 24 stone prisms and two jeol trees. All the marks were pointed out to the kanungo and Raj amins, and a copy of the map and traverse data has been made over to the Collector.

Burdwan District.

83. *Relaying of boundary of Char Kasthosali.*—This was a claim preferred by the Paikpara Raj, contending that a diluvial mauza named Ramjibanpore appertaining to his estate, No. 23, of the Nadia Collectorate, had reformed within the boundary of Char Kasthosali, and requesting that the reformed land be demarcated.

84. A surveyor was deputed to work under the supervision of Sub-Deputy Collector, Babu Nalmiudra Lal Bose, who pointed out the lands to be surveyed, which proved to comprise an area of 580 acres.

85. The traverse was connected up to the traverse of Rudrapara, and the boundaries of all the adjoining revenue survey villages of 1855-56 have been shown on the plan, a copy of which has been made over to the Sub-Deputy Collector.

Purnea District.

86. *Relaying of boundary between Hulhuli (Tulsia-Bhita) and Gach Patharia.*—The Government estate Tulsia Bhita is situated in mauza Hulhuli, and at the request of the Collector the western boundary was demarcated according to the revenue survey map of 1847 on account of an encroachment made by the proprietor of Gach Patharia.

87. The boundary was formed by the Chena river, both banks of which were traversed and marked with 54 bamboo posts and mounds of earth. The marks were pointed out to the kanungo of the Purnea Collectorate and the agent of the Tagore Raj Estate.

88. A copy of the map and traverse data has been supplied to the Collector of Purnea.

Hazaribagh District.

89. *Traverse survey of Giridih Municipality.*—This survey was applied for by the Chairman of the Municipality.

90. The area comprises 1·41 square miles and has been plotted on two sheets on the 16″ to 1-mile scale and one sheet for the 4″ to 1 mile rough plot.

91. There are 282 theodolite stations which have been marked with 4 old masonry platforms, 84 iron pegs, 186 local stones, 2 marks on rocks *in situ* and 5 wooden pegs.

Ganges Diara Experimental Survey.

92. This work consisted of the relaying of the boundary of a village in the diara tract by means of plane table and sight vane from reference pillars fixed on the high banks as proposed in my No. 960T.S—1(1)-18, dated 19th August 1909, and sanctioned by the Board of Revenue, Lower Provinces.

93. Four reference points were chosen, approximately 40 chains apart, on the high bank of the river north of Dinapore and marked temporarily

by pegs, and these were connected by a theodolite traverse to certain trijunction marks of villages, which a comparison of the old revenue survey maps and the modern survey map showed to be common to these two surveys. Poles were erected on these reference points and a plane table traverse run round the boundary of a selected village, Kasim Chak, in the middle of the diara tract.

94. All the plane table stations were marked temporarily on the ground by wooden pegs and these stations were then all taken up by the theodolite and the result plotted on the map. The discrepancy between the boundary as laid down by the plane table and the true boundary according to the map amounted in some places to as much as two chains. All this work was done first of all by Captain Foster and then by myself. The results proving identical. From the result of this experiment, as I have already reported to the Board, I am of opinion that:—

(*a*) Plane table and sight vane relaying of a boundary should not be adopted when accurate relaying of a boundary is required unless there are a fair number of fixed reference points close to the boundary to be relaid.

(*b*) The fixing of selected points on the "diara" tract will be useful for relaying of boundaries by the theodolite, but in addition to the stones to be embedded, prominent marks such as temples, large single trees and the gables of houses should be observed to with the theodolite and plotted on the sheets, and if a good number of such subsidiary points can be fixed a good deal can be done with a plane table hereafter.

95. There were 77 new theodolite stations which were marked by 2 local stones, one iron cylinder and 74 wooden pages.

96. The experiment is now to be extended to a considerable tract next year.

97. The maps under compilation which will show revenue survey, diara survey and modern village boundaries will prove of great assistance to District Officers.

PART IV. REPORT ON THE BENGAL DRAWING OFFICE.

STANDARD MAPPING SECTION.

98. The work of this section is entirely confined to compilation of standard maps and Traverse Charts and the establishment belongs to the Survey of India, but for the reasons explained in my last year's report it is advisable to include the report thereof in the General Report of the Bengal Surveys.

99. During the year under report 14 standard maps, representing an area of 3,125·10, square miles, have been submitted for publication. The numbers are as follows:—

Nos. 72 $\frac{K}{13}$ $\frac{K}{16}$ in old style 30′ × 15′ of four sections of districts Monghyr and Bhagalpur; Nos. 72 $\frac{N}{13}$, $\frac{N}{16}$, $\frac{N}{15}$, $\frac{O}{9}$, $\frac{O}{10}$, $\frac{O}{13}$, $\frac{O}{14}$ and 178 $\frac{B}{3}$, $\frac{B}{4}$, $\frac{C}{1}$, $\frac{C}{2}$ of Purnea district, and 79 $\frac{P}{3}$, $\frac{P}{15}$ of Khulna and Backerganj.

100. Forty-five standard maps are in hand, of which 5 viz. Nos. 72 $\frac{K}{5}$, $\frac{K}{13}$, $\frac{L}{3}$ and $\frac{L}{5}$ of districts Monghyr and Bhagalpur and No. $\frac{O}{15}$ of Purnea are complete, except for final examination, 2, viz., Nos. 78 $\frac{B}{2}$ and $\frac{B}{6}$ which complete district Purnea of Bengal, have been held up for the incorporation of the material of Jalpaiguri district of Eastern Bengal and Assam; 27 maps of districts South Monghyr, Sonthal Parganas and Sambalpur have been completed in pencil with village boundaries in blue for the compilation of thana maps, they are Nos. 72 $\frac{K}{7}$ (previously published with a portion of North Monghyr), Nos. 72 $\frac{L}{1}$, $\frac{L}{6}$, $\frac{L}{7}$, $\frac{L}{9}$, $\frac{L}{10}$, $\frac{L}{11}$, $\frac{O}{4}$, $\frac{O}{8}$, $\frac{O}{12}$, $\frac{O}{16}$, $\frac{P}{1}$ $\frac{P}{3}$, $\frac{P}{4}$, $\frac{P}{6}$, $\frac{P}{7}$, $\frac{P}{9}$, $\frac{P}{10}$, $\frac{P}{11}$, $\frac{P}{13}$, $\frac{P}{15}$, $\frac{P}{16}$, Nos. 64 $\frac{O}{6}$, $\frac{O}{7}$, $\frac{O}{10}$, $\frac{O}{11}$ and $\frac{O}{15}$; and 15 are in hand, viz., Nos. 72 $\frac{C}{3}$, $\frac{C}{5}$, $\frac{C}{4}$, $\frac{C}{8}$, $\frac{L}{13}$, $\frac{L}{15}$, $\frac{L}{14}$, $\frac{O}{11}$, 63 $\frac{O}{14}$, $\frac{O}{15}$, $\frac{O}{16}$ and 64 $\frac{O}{3}$, $\frac{O}{18}$, $\frac{O}{14}$ and $\frac{O}{16}$.

101. The thana maps of Western South Monghyr and Eastern Patna surveyed in 1907-08 have been prepared by the Settlement Officer, Bihar, as the Bengal Drawing Office had a full programme elsewhere, the standard maps for this area therefore were not taken in hand for thana mapping; and, owing to the necessity of correcting the co-ordinates from origin of the area for Western Patna and Arrah thana of district Shahabad, cadastrally surveyed during 1908-09, the standard mapping of this area also could not be commenced in time for thana mapping, and a preliminary edition of the thana maps of this area has been prepared from 2" rough plots and marked "not final." The final thana maps will be prepared from standard maps next year.

102. For the purpose of working off arrears the following six additional standard maps for districts Purnea, South Monghyr and South Bhagalpur have been commenced:— 72 $\frac{G}{16}$, $\frac{B}{13}$, $\frac{K}{4}$ and $\frac{K}{16}$ and 78 $\frac{B}{3}$ and $\frac{B}{6}$.

103. A new edition of sheets Nos. 73 $\frac{B}{3}$ and $\frac{B}{6}$ of Ranchi district and adjoining States was taken up, outside the programme of the section, at the request of the Superintendent, Map Publication Office, as the old edition was out of print.

104. All reduction work is well advanced, and as far as current work is concerned, the reductions are made immediately on receipt of the reproduced copies of a village map.

105. Only one traverse chart, No. 79 $\frac{N}{14}$, of Chittagong, commenced last season, was completed this year and sent for publication. The programme for the year did not include the preparation of any other traverse chart.

106. The following items of work have been done for the Map Publication Office of the Survey of India:—

(*a*) 12 gray prints have been coloured.
(*b*) Fiscal limits and cultivation have been coloured on 30 black prints.
(*c*) 42 uncorrected proofs have been examined and corrected.

Also 26 published proofs of maps have been coloured.

Provincial Drawing Section.

107. This section deals with thana, trijunction marks and district maps and all miscellaneous and extra departmental work, such as compilation of index maps, diagrams for other departments, etc.

108. *Thana maps.*—During the year, maps of nine thanas, viz., Monghyr, Jamalpur, Kharagpur, Jamui and Chakai of District Monghyr and Dumka, Pakaur, Godda and Rajmahal of the Damin area of the Sonthal Parganas have been prepared from standard maps. These thanas are on 17 sections. The maps of thanas Monghyr, Jamalpur and Kharagpur of Monghyr district and Dumka of the Sonthal Parganas in six sections have been printed and 204 copies of each have been reproduced and supplied. The others could not be printed during the year owing to discrepancies, which have been referred to the Settlement Officers. The final thana map of Pakaur subdivision outside the Damin area, also based on the standard map, is in hand.

109, Also seven thana maps, compiled by the Settlement Officer, Bihar, in 13 sections have been compared and 204 copies of each reproduced and supplied; these maps are of thanas Lakhisarai, Surajgarha, Shaikhpara and Sikandra of Monghyr district and Barh, Mokameh and Bihar of Patna district. And two thana maps in three sections compiled by the Settlement Officer, Chota Nagpur, have been compared and 200 copies supplied; these are of thanas Sisai and Lapung in Ranchi district.

110. *Preliminary Thana Maps.*—Owing to the necessity of correcting the co-ordinates from origin of the area of Western Patna and thana Arrah of district Shahabad, cadastrally surveyed in 1908-09, the standard maps of this area could not be commenced in time for thana mapping purposes; a preliminary edition therefore of 10 thanas in this area was prepared from 2" rough plots and marked "not final" the thanas, viz., Arrah of Shahabad district and Phulwari, Fatua, Dinapore, Patna, Maner, Hilsa, Bikram, Islampur and Masaudhi Buzurg of Patna district in 12 sections, have all been printed and three copies of each supplied to the Settlement Officer, Bihar, except of thanas Patna and Phulwari which could not be printed owing to discrepancies,

111. *Trijunction mark maps*.—Nineteen thanas have been dealt with during the year under report. Of these only one thana, Jamalpur, of district Monghyr, prepared in one section from standard map, has beeen completed and 10 copies supplied. The trijunction mark maps of thanas Monghyr and Kharagpur of Monghyr district and Dumka, Rajmahal and Pakaur of the Sonthal Parganas district in 32 sections, prepared from standard maps, could not be completed owing to discrepancies, which have been referred to the Settlement Officers. The maps of thanas Arrah in Shahabad and Phulwari, Fatua, Dinapore, Patna, Maner, Hilsa, Bikram, Islampur and Masaudhi Buzurg in 33 sections will be printed off as soon as the spelling of village names and their thana numbers are compared against the original maps. The maps of thanas Jamui and Chakai of Monghyr district and Godda of the Sonthal Parganas are in hand. Trijunction mark maps of thanas Barh, Bihar and Mokameh in Patna district in 15 sections, received from the Settlement Officer, Bihar, have been printed and 30 copies of each provided; eight copies each in 15 sections of thanas Sheikhpura, Sikander, Lukisarai and Surajghara of Monghyr district also supplied by the Settlement Officer, Bihar, and 30 copies of each of thanas Lohardaga, Sisai and Lapung of Ranchi district in 15 sections supplied by the Settlement Officer of Chota Nagpur, have been printed off and supplied.

112. *Miscellaneous work*.—Thirty-four of the special Ganges Diara maps from the junction of the Gogra and Ganges rivers eastwards up to standard sheet, No. $72\frac{a}{11}$, of districts Darbhanga and Patna have been completed and 10 more eastward from this are in hand. The maps at present show —

(*a*) Modern traverse trijunctions and village boundaries and sites according to modern surveys in black.

(*b*) Course of the river according to modern surveys in a continuous blue line.

(*c*) Selected fitting points, or traverse trijunction points common to the revenue and modern surveys, indicated by red and black concentric circles.

113. On completion of the field work this field season the reference pillars will be plotted and the revenue and diara survey boundaries will be transferred on to the sheets in the colours red and green respectively.

114. Work has been commenced on a district map of Purnea district, and index maps of districts Jessore and Birbhum have been prepared on trace prints, on scale 4 miles to 1″ which have been reduced by photography to one-fourth in the Photo-Litho Office of the Survey of India Department and 20 copies of each supplied.

Reproduction Section.

115. The total outturn of work done by this section during the year under report was 23,036 plates vandyked, 632,572 copies printed and 626,659 copies despatched. Compared with last year, the outturn in the number of plates is slightly larger and the number of copies printed and despatched considerably so.

116. *South Monghyr (season 1906-07)*.—There are 2,433 sheets for reproduction and not 2,391 as mentioned in last year's report, 2,127 sheets were for reproduction according to the first estimate and subsequent doubling of the copy order, making 75,790 copies to be printed; 50,012 copies of 1,187 of the above sheets were reproduced a second time according to the second estimate and 10,585 copies of 216 entirely new sheets were dealt with in the second estimate, making a total of 136,387 copies. Of these 136,387 copies which have been printed, the Settlement Officer required only 130,024 copies according to his second revised estimate. The balance of 6,363 copies, which do not represent complete villages, are being kept in stock to meet the requisition of the Collector when he needs more copies for sale; 64,003 copies were supplied to the Settlement Officer last year and the balance, 66,021, have been supplied this year.

117. *South Monghyr (season 1907—09)*.—One thousand three hundred and five sheets of 1907-08 and 46 sheets of 1908-09, making a total of 1,351 sheets, have been received for reproduction; 132,425 copies of 1,331 sheets of these have been printed and despatched.

118. *South Bhagalpur (season 1906-07).*—Only 692 out of the 693 sheets of this season's area were required to be reproduced. This season's work is on the same lines as that of South Monghyr of the same season with regard to first and revised estimates; 16,665 copies of 642 sheets were for reproduction according to the first estimates; 16,633 copies of 423 sheets of the above were for reproduction a second time, and 2,208 of 50 new sheets were for reproduction according to the second estimate, making a total of 35,506. It was mentioned in last year's report that 19,232 copies were printed and 18,908 despatched, the remaining 16,274 copies have been printed during this year and the remaining 16,598 copies despatched.

119. *Purnea.*—Sixty-eight copies of 68 sheets were reproduced during the year for administrative purposes and supplied to the Collector at his request.

120. *Midnapore (season 1903—07), Parganas Doro Dubnan, Jallamutha, etc.*).—Out of 1,521 sheets for reproduction 266 sheets with 9,256 copies were reproduced last year; 23,406 copies of 864 sheets have been reproduced this year, making a total of 32,662 copies of 1,130 sheets; 8,701 of these copies were supplied last year and 21,654 copies have been supplied this year, making a total of 30,355 copies supplied up to date. The reproduction of sheets of this area depends on the receipt of *badars* from the Settlement Officer.

121. *Midnapore, Jhararam, Chiara and Matkatpur Estates.*—There are 688 sheets for reproduction, 28,785 copies of 683 sheets have been reproduced during the year and despatched.

122. *Orissa.*—Sixty-two thousand five hundred and sixty copies of 933 traces of district Balasore have been reproduced this year, making a total to date of 155,860 copies of 3,532 traces, 90,665 copies were despatched last year and the balance of 65,195 copies have been despatched this year. In addition 51 copies of 26 original sheets of district Puri and 5 copies of 4 sheets of district Cuttack have been supplied to the Settlement Officer at his request for revision work.

123. *Sonthal Parganas.*—Of the first half of the third programme all the 1,710 sheets have been reproduced and the 34,672 copies supplied, of the second half of the third programme the 1,712 sheets to be dealt with have been reproduced and all the 38,918 copies supplied.

124. *Patna (season 1907-08).*—There are about 1,423 sheets for reproduction, of which 1,315 have been reproduced with 145,630 copies and 137,990 copies of 1,248 sheets supplied.

125. *Patna (season 1908-09).*—There are 2,229 sheets for reproduction. Five hundred and four have been received, of which 382 sheets have been reproduced with 21,800 copies and 17,320 copies of 243 sheets despatched.

126. *Hooghly.*—Thirty-two sheets sent by the Settlement Officer for final reproduction have been reproduced and 2,090 copies supplied.

127. *24-Parganas and Khulna Sundarbans (seasons 1905-08).*—The 113 sheets on scale 4″=1 mile of this survey have been reproduced with 13,560 copies, three of each mounted on cloth. These have been distributed according to instructions of the Board of Revenue, Lower Provinces.

128. *Reproduction for attestation.*—The entire programme of reproduction of village maps for attestation pruposes has been completed during the year. The total outturn of 3,009 sheets, 9,932 copies, is made up as follows:—Shahabad 2,889 sheets 9,652 copies; Hooghly 19 sheets 78 copies; Birbhum 101 sheets 202 copies.

In addition one copy of each sheet has been printed and supplied to the Standard Mapping Section.

129. *Reproduction of thana maps.*—The details of reproduction of 4,506 copies of 32 sheets for the Provincial Drawing Section are given in paragraphs 108 to 110 of this report.

130. *Reproduction of trijunction mark maps.*—Reproduction of 1,030 copies of 46 sheets are noted in paragraph 111 of this report.

131. *Unforeseen.*—The grant for this work was increased to Rs. 2,973. The total outturn for the year was 8,072 copies of 872 sheets, despatched to Collectors as follows:—Saran 2,770 copies of 277 sheets; Puri 162 copies of 81 sheets; Muzaffarpur 4,770 copies of 477 sheets, and Champaran 370 copies of 37 sheets.

132. *Miscellaneous work.*—The following miscellaneous work has been done :—1,964 copies of 106, 2″ reductions of districts Shahabad, Hazaribagh and Birbhum were reproduced and supplied to the Settlement Officers and Officer in charge Traverse Section, Bengal Surveys; 236 copies of 6 correction slips for thana maps were printed and supplied to the Director of the Department of Land Records, Bengal; 540 copies of 27 attestation *mujmillis* and 30 copies of a khanapuri map have been printed for the Settlement Officer, Bihar; and 810 copies of the Survey and Settlement index map have been printed. Besides this, a considerable amount of work, amounting in all to 6,695 plates, 21,714 copies, a large amount of which is in colours, has been done out of office hours on book debit payments for the Calcutta Surveys, Calcutta Corporation, Settlement Officers, etc.

133. *Thakbust map of Burdwan.*—Three hundred and ten maps have been copied during the year and 191 remain; 82 maps of those that remain are in such a hopelessly torn condition, parts of them being missing, that it is not possible to trace them separately, orders with regard to these are being taken.

Badar Section.

134. *Badars* of 1,148 villages have been corrected on original maps during the year, viz., 38 villages of district Purnea; 57 of district Monghyr; 99 of district Patna; 2 of district Muzaffarpur; 2 of district Singhbhum; 949 of district Midnapore, and 1 of district Khulna. Village names have been corrected and thana numbers entered of 4,114 villages in traverse volumes and 5,152 in traverse field-books. Skeleton traverse plots of 8 villages have been made and supplied to the Settlement. A set of 1″=1 mile published standard sheets of district Midnapore and the jurisdiction maps of district Gaya have been coloured to show surveys previously done and supplied to my office and the stations of 155 villages of the cadastral survey of district Sambalpur, which were picked up in the subsequent traverse survey, have been indicated in the traverse tables.

Map Record Section.

135. The section has received during the year 9,697 original sheets of village maps of Bengal, making a total to date of 106,520 sheets stored in the Record Office. Lists, either thanawar or parganawar, have been made for 1,821 sheets, making a total of 87,789 sheets of which lists are complete; lists of the remainder will be made out when their thana jurisdiction lists are received.

136. The pasting of printed serial numbers on the sheets is practically up to date. Each compartment of the racks is cleared out periodically and the sheets examined and broken edges and other minor repairs attended to.

137. During the year, with the exception of 12 volumes which are in use with field parties, all the remaining revenue, diara survey, traverse and field book volumes and board plans of old and recent surveys in Bengal, numbering 1,599, have been taken over from the Survey of India. The field-books have been stored away from the traverse volumes in the wooden racks re-erected for that purpose. There are now 844 revenue and diara surveys volumes, 688 traverse volumes, 1,715 field-books and 58 volumes of board plans of miscellaneous surveys, making a total of 3,305 volumes, of which 81 have been issued to Field Parties and Settlement Officers.

138. There are, including 1,770 traces of districts Midnapore, Muzaffarpur, Bhagalpur, Cuttack and Puri received during the year, altogether 58,486 traces of original maps stored in the map-record room.

139. The total of miscellaneous maps, as given in paragraph 142 of last year's report, should have been 2,246 and not 3,015. During the year 862 miscellaneous maps, such as original thana and trijunction mark maps, rough traverse plots, index maps, etc., have been received, making the total 3,108.

140. Besides these, 1,819 miscellaneous maps of the Calcutta surveys, such as fair municipal, revenue and index maps are stored in the office and 2,746 copies of municipal and 1,536 copies of revenue maps. These municipal and revenue maps are held at the disposal of the Collector of the 24-Parganas for sale and a register is kept up of all the sales. Two thousand and twelve copies have been either sold or supplied to the Corporation during the year.

CHAPTER III.

PART I.—TOURS OF THE DIRECTOR OF SURVEYS.

141. I have been in the field and on tour of inspection for 171 days. I have inspected all sections of the Bengal Surveys frequently during field and recess seasons.

142. I did some personal "partalling" of the field sheets of the Bihar and Chota Nagpur settlements, and I examined a large number of the independent "partals" with the maps in office. I also visited, on several occasions, the new Map Reproduction office of the Chota Nagpur Settlement at Ranchi. I "partalled" in the field some sheets of the Birbhum Settlement and inspected generally some "partals" and sheets of the same.

143. Captain Foster, during my absence on leave, toured for 78 days and visited all sections of the Bengal Surveys, at least twice, and also inspected the cadastral sheets and "partals" at the Settlement head-quarters at Ranchi and Bhagalpur.

144. I satisfied myself that the cadastral survey work of all these settlements is being carried out with the same care as heretofore. The standard of accuracy expected is well understood by all Settlement Officers and there is certainly no falling off.

145. The general finish of the maps is good and all reasonable precautions are taken to keep the sheets clean and in good order.

146. The reproduction work of the Ranchi office is good and, as this office has only been working a short time, this is very satisfactory.

PART II.—SERVICES OF OFFICERS.

147. Messrs. A. W. Smart and L. F. Berkeley in charge of the Traverse Section and the Bengal Drawing Office have both done excellent work during the year under report. Both these charges are now very heavy and both officers have managed their sections with exceptional ability.

148. Mr. R. B. Smart has conducted the intricate operations connected with the Calcutta Survey with his usual care and success.

149. Mr. E. G. Hardinge in charge of the Imperial Standard Mapping Section of the Bengal Drawing Office has had a heavy programme of work to deal with, as the establishment of this office was largely temporarily increased with a view to bringing up all arrears within a stated period. Mr. Hardinge has carried out his duties very satisfactorily.

150. Messrs. C. S. Krsal, J. C. Lears, L. B. Fitz-Gibbon, J. H. Johnson, P. D. Gomes, B. C. Gasper and Mr. A. E. LeFranc and the Supervisors of the Bengal Drawing Office have all worked well.

151. A large number of the clerical and subordinate staff are mentioned for good work by the officers in charge of their sections.

152. The relations between the Survey and Settlement Departments continued excellent, and I have again to thank Mr. H. McPherson, I.C.S., Director of the Department of Land Records, Bengal, for his ever ready advice and cordial co-operation.

I have the honour to be,

SIR,

Your most obedient servant,

R. T. CRICHTON, LIEUT.-COLONEL, I.A.,

Director of Surveys, Bengal.

APPENDIX I.—PART A.

Summary of the outturn of work of the Survey Parties in Bengal for 1909-10.

District.	Traversing.				
	Number of villages.	Linear miles of chaining.	Number of stations at which theodolite was set up.	Number of azimuths.	Number of sub-traverses.
1	2	3	4	5	6
Private Estates.					
Shahabad	2,226	6,396	47,033	193	2,275
Ditto Diara	21				
Hazaribagh, including Parasnath Hill ...	2,755	7,775	61,633	285	2,633
Birbhum (Santhali villages) ...	103	558	3,041	23	146
Miscellaneous.					
Jessore (Mokimpur Estate) ...	21	142	1,021	5	54
24-Parganas—Palta Zone line	1	5	82	1	6
Ditto Duckineore Zone line ...	1	5	104	1	6
Darjeeling—Kurseong Municipality ...	1	13	412	4	12
Hazaribagh—Giridih ditto ...	1	1	488	...	93
Relaying boundaries. Cuttack, Dhenkanal and Athgarh ...	...	21	272	...	...
Relaying boundaries. 24-Parganas—Rangafala ...	...	3	55	...	...
Relaying boundaries. Nadia, Shunkarpur—Kudrapor, Char Nidaya.	...	30	116	...	...
Relaying boundaries. Nadia—Char Gyaspur	...	17	85	...	...
Relaying boundaries. Darjeeling, Mechi River, Nepal ...	...	17	91	...	...
Patna—Diara Captain Peach and Bankipore Diara blocks.	...	31	140	...	13
Relaying boundaries. Purnea—Hulhuli (Tulsia Bhita). Gach Pathacia.	...	2	10	...	...
Relaying boundaries. Burdwan—Char Kasthosali ...	...	15	61	...	...
Ganges river, Reference pillars (Experimental Survey).	...	12	86	...	...
Total ...	5,130	15,085	1,08,810	513	5,248

APPENDIX I.—PART B.

Statement of outturn and cost-rates.

District and Estate.	Description of work.	Estimated area to be dealt with in square miles.	Year of inception of operations.	Area surveyed in square miles. During the year under report.	Area surveyed in square miles. Totals, including previous years.	Cost-rate per square mile. During the year under report.	Cost-rate per square mile. From beginning to end of year under report.	Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 6.	Estimated final cost-rate per square mile.
1	2	3	4	5	6	7	8	9	10	11
Private Estates.									Rs.	
Shahabad	Traverse	4,373	1907	1,558	3,468	36-46	35-78	815	25,000	36-1
Ditto Diara	Ditto	92	1908	92						
Hazaribagh, including Parasnath Hill ...	Ditto	7,761	1906	1,813	3,299	35-24	34-43	3,725	1,30,000	33-3
Birbhum (Santhali villages)	Ditto	133	1909	133	133	31-71	31-71	...	...	31-7
Miscellaneous.										
Jessore—Mokimpur Estate	Ditto	28	1909	28	28	...	...	...	...	...
24-Parganas—Palta Zone line	Ditto	...	1909	...	...	...	...	...	...	...
Ditto— Duckineore Zone line	Ditto	...	1909	...	...	...	...	...	...	...
Darjeeling—Kurseong Municipality ...	Ditto	2	1909	2	2	...	...	...	...	...
Hazaribagh—Giridih ditto ...	Ditto	1	1909	1	1	...	...	...	...	...
Relaying boundaries. Cuttack, Dhenkanal and Athgarh	Ditto	...	1909	...	...	...	...	...	...	...
Relaying boundaries. 24-Parganas—Rangafala ...	Ditto	...	1909	...	...	...	...	...	...	...
Relaying boundaries. Nadia—Shunkarpur, Kudrapur, Char Nidaya.	Ditto	...	1909	...	...	...	...	...	...	...
Relaying boundaries. Nadia—Char Gyaspur	Ditto	...	1909	...	...	...	...	...	...	...
Relaying boundaries. Darjeeling, Mechi River, Nepal	Ditto	...	1909	...	...	...	...	...	...	...
Patna—Diara Captain Peach and Bankipore Diara blocks.	Ditto	7	1909	7	7	...	...	...	...	...
Relaying boundaries. Purnea—Hulhuli (Tulsia-Bhita), Gach Pathacia.	Ditto	...	1909	...	...	...	...	...	...	...
Relaying boundaries. Burdwan—Char Kasthosali ...	Ditto	1	1909	1	1	...	...	...	...	...
Ganges River (experimental area) ...	Ditto	...	...	...	...	...	...	...	...	...
Total ...	...	11,645	...	3,633	7,031	...	...	...	...	...

APPENDIX II.

Statement of sums expended for the year ending 30th September 1910.

District, etc.	Description of work.	Expenditure incurred during the year under report.			Total expenditure from inception to end of the year under report.		
		Actual cost.	Share of Director of Survey and his office.	Total.	Actual cost.	Share of Director of Survey and his office.	Total.
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Shahabad	Traverse	51,464	6,710	60,164	(a)3,09,455	17,858	(a)3,27,313
Hazaribagh	Ditto	(b)54,615	5,846	60,463	2,96,969	19,733	3,16,702
Birbhum	Ditto	3,580	606	4,186	2,860	606	4,196
Patna (Bankipore Diara block)	Ditto	374	63	437	374	63	437
Miscellaneous.							
Saran, Shahabab, and Patna Ganges Diara	Ditto	1,618	257	1,775	1,618	257	1,775
Darjeeling—Nepal boundary, Relaying pillars on Mechi river.	Ditto	615	97	690	513	97	609
24-Parganas—Relaying boundary of Bangaon *alias* Radhanagar.	Ditto	406	69	475	406	69	475
24-Parganas—Dackinore and Patia Mauzas Survey.	Ditto	145	25	170	145	25	170
Nadia—Relaying eastern boundary of Bhagirathi near Monia Gangapur.	Ditto	467	79	546	467	79	546
Nadia—Relaying boundary of Char Shankerpur and Radhapur.	Ditto	1,382	234	1,616	1,382	234	1,616
Sambalpur—Relaying boundary of Athgarh and Dhenkanal Estates.	Ditto	970	164	1,134	970	164	1,134
Jessore—Mukimpur Estate	Ditto	953	158	1,091	933	158	1,091
Darjeeling—Kurseong Municipality ...	Ditto	251	43	294	253	43	296
Hazaribagh—Giridih ditto ...	Ditto	159	26	185	178	30	208
Purnea—Relaying boundary of Tulsihabhi ta and Garh Pathara.	Ditto	477	81	558	477	81	558
Burdwan—Relaying boundary of Char Kashtobhati.	Ditto	393	68	461	393	68	461
Calcutta—Revision Survey	Cadastral and Mapping.	33,525	5,313	38,838	41,760	7,260	49,020
Ditto —Revenue Maps and demarcation of Revenue holdings.	Cadastral and Mapping.	12,864	2,178	15,042	12,864	2,178	15,042
Calcutta—Revenue Maps and demarcation of Revenue holdings.	Records	64	11	75	64	11	75
Calcutta—Town Maps	Mapping	4,774	668	5,582	4,774	803	5,577
Ditto —Wall Maps	Do.	156	26	182	156	280	436
Ditto —Suburbs Maps	Do.	3,707	635	4,335	3,707	653	4,360
Ditto —Revenue Maps, Suburbs	Do.	1,266	214	1,480	1,266	214	1,480
Ditto —Suburbs Survey including Revenue Work and Panchannagram.	Records	...	...	...	59,236	2,351	61,586
Calcutta—Suburbs Survey including Revenue Work and Panchannagram.	Cadastral	121	20	141	1,05,366	11,071	1,16,437
Fort Commissioners' Land Acquisition Survey fair maps.	Mapping	51	9	60	1,886	316	1,892
Preparation of the plans of the land acquired by Fort Commissioners.	Do.	351	60	410	352	69	418
Total	Traverse	1,17,092	19,919	1,37,011	5,13,091	84,553	5,64,653
	Cadastral and Mapping.	46,826	7,767	54,591	2,83,338	32,761	3,16,099
	Records	64	11	75	39,236	2,325	41,561
Bengal Drawing Office	Standard Maps ...	33,540	5,677	39,217	1,33,758	18,784	1,52,477
	Badars	5,612	946	6,558	26,653	3,662	30,315
	Map Records ...	5,758	974	6,732	23,613	3,794	27,407
	Town Maps ...	4,333	733	5,066	22,445	3,261	25,706
	Triangulation Mark Maps.	2,233	376	2,609	11,511	1,116	12,627
	District Maps ...	346	41	386	3,888	345	4,233
	Reproduction for settlement.	1,846	244	1,087	23,567	1,861	25,528
	Reproduction for distribution and sale.	53,054	8,977	62,031	1,67,973	23,987	1,91,960
	Tracing and examination of Thakbust Map of Burdwan.	913	154	1,066	913	154	1,066
	Printing of 1" Maps, Khulna and 24-Parganas Sunderbans.	349	59	408	349	59	408
	Ganges Diara Maps compilation.	2,717	459	3,177	2,970	423	3,393
	Index Maps for Annual Report.	234	40	274	675	113	788
	Extra Departmental work.	2,300	390	2,690	8,315	836	9,150
	Grand total ...	2,75,027	46,561	3,22,215	9,61,888	1,14,895	10,66,483

(a) Includes Rs. 499 on account of 4 per cent. charge for instruments for 1907-08.
(b) Includes Rs. 4,251 for Parasnath work.

R. T. CRICHTON, Lieut.-Col., I.A.,
Director of Surveys, Bengal.

B. S. Press—4-1-1911—3164J—400—G. A.

REVENUE DEPARTMENT.

LAND REVENUE.

CALCUTTA, THE 23RD FEBRUARY 1911.

RESOLUTION—No. 944L.R.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1910.

THE programme of work was carried out practically in its entirety.

2. The main work of the Survey Department consisted of traverse survey, which covered an area of 3,635 square miles and exceeded the outturn of the previous year by 270 square miles. In the districts of Shahabad and Hazaribagh, where large areas were dealt with, the cost-rates of traverse survey amounted to Rs. 36·4 and Rs. 35·2 respectively, as against Rs. 34·6 and Rs. 33·5 in the previous year. The higher rate in Shahabad is ascribed to more intricate traversing than in the previous year and to difficulties of transport in a large jungle tract in thana Bhabua; while in Hazaribagh the excess is accounted for by the nature of the country which necessitated more stations to the square mile. The Lieutenant-Governor in Council is satisfied that the work in each case was done with as much economy as was possible under the circumstances.

The revision survey of Calcutta was in progress and proved a difficult task. An experimental survey made of a small area in the Ganges diara near Dinapore proved instructive, and is being continued in a larger tract this year. The maps, which will show village boundaries according to the Revenue Survey, the Diara Survey and present possession, will prove of great assistance to District officers. The work of the Bengal Drawing Office went on smoothly, and satisfactory progress was made.

3. As in the previous year, the operations of the Settlement Department consisted of—the settlement of raiyati rents and of land revenue in temporarily settled estates; the preparation of a record-of-rights and the settlement of all raiyati rents in permanently settled estates in the Sonthal Parganas; the preparation of a record-of-rights, with the decision of all agrarian disputes, and the settlement of fair rents on the application of landlords or tenants, in permanently settled tracts other than those of the Sonthal Parganas; and the revision of the cadastral survey and record-of-rights in the temporarily settled portion of Orissa, with experimental maintenance of the record in a selected area.

The work lay in seventeen districts, and the area cadastrally surveyed during the year, exclusive of 1,579 square miles of revision survey in Orissa, was 3,474 square miles as against 3,378 square miles in the previous year. Records were finally published in respect of 4,302 square miles, as against 4,234 square miles in 1908-09. Without taking into account the revision work in Orissa, operations over 3,718 square miles were finished during the year. The total area for which a record-of-rights has been completed in Bengal under the supervision of the Director of Land Records, is now 51,392 square miles, and the average annual outturn during the last 24 years has been 2,141 square miles.

4. Particulars of rent and status were recorded during the year for 515,698 tenancies and were revised for 618,668 tenancies. The settlement of rents in the temporarily settled and Government estates in Midnapore, and in the permanently settled estates of the Sonthal Parganas, was practically

completed in the previous year. The following table shows the results of this class of work done in certain other areas during the year under report:—

Tract under Settlement.	Proceedings under section 109 C of the Bengal Tenancy Act.			Cases under section 105 of the Bengal Tenancy Act.			
	Number of tenants.	Rent according to landlord.	Rent settled by compromise.	Number of tenants.	Former rental.	New rental.	Enhancement per cent.
		Rs.	Rs.		Rs.	Rs.	
Hooghly Zamindari Estates.	443	6,265	7,107	180	966	1,122	16·1
South Monghyr ...	19,437	2,35,083	2,19,424	977	21,630	23,521	8·7
Patna district ...	7,960	1,26,007	1,20,189	605	4,753	5,423	14·0
Shahabad ...	362	7,124	7,091	Nil	Nil	Nil	Nil

It is a matter of satisfaction that so much use is being made of the provisions of section 109 C of the Bengal Tenancy Act, which was designed to remedy strained relations between landlords and tenants. In Chota Nagpur, the settlement of fair rents has formed a very small item of work. The total number of tenants for whom rents have been settled in the district of Ranchi is 593, and their rents have been raised from Rs. 1,058 to Rs. 1,316 or by 24 per cent., while in the Dhalbhum Estate in Singhbhum the rents of 225 tenants have been raised from Rs. 939 to Rs. 1,371, or by 47 per cent.

5. The commutation of produce rents under section 40 of the Bengal Tenancy Act is a very important item of work in South Bihar. The following table shows the number of applications received and disposed of up to the 30th September 1910:—

District.	Total number instituted.	Disposed of—			Balance.
		Up to the end of the previous year.	During the year.	Total.	
South Bhagalpur	4,281	3,131	1,175	4,208	73
„ Monghyr	12,256	2,752	6,808	9,560	2,696
Patna	4,729	268	2,565	2,763	1,966
Shahabad	39	...	...	...	39

South Monghyr stands out most conspicuously in this respect. Of the cases disposed of during the year, commutation was allowed in 6,223, and disallowed in 585, cases. The investigations made were thorough, and the fact that in 62 out of 76 appeals the judgment of the lower court was upheld shows that the work done was generally good. In Shahabad, the tract dealt with was small; and it is reported that, although a considerable area is still under produce rent, no disputes of importance have so far been raised regarding either the system of rent or the share of the landlord. A considerable amount of commutation is also being done in the course of the revision operations in Orissa, where it is subject to certain special circumstances. Up to the close of September 1910, 2,604 applications had been received in the districts of Cuttack and Balasore taken together, but only 479 had been disposed of. A large percentage of these was disallowed, on grounds to which exception cannot be taken; and the Lieutenant-Governor in Council is satisfied that in exercising the discretion allowed by clause (6) of section 40 of the Bengal Tenancy Act, to admit or reject an application, the officers of the Settlement Department are having due regard to the peculiar features of that province.

6. The cadastral survey in Bihar and Chota Nagpur made satisfactory progress, the area surveyed being about the same as in the previous year.

An additional area of 132 square miles was taken up, in advance of the provincial programme, in the Rampur Hât subdivision of Birbhum, in consequence of persistent discontent amongst the Santhal cultivators. The cadastral survey and initial record-writing, though commenced late in the season, were successfully carried out. The survey work of the Settlement Department in all these areas was examined by the Director of Surveys, and the Lieutenant-Governor in Council has received, with satisfaction, his assurance that in accuracy and finish the maps deserve commendation.

7. The survey and the preparation of a record of-rights in the districts of Ranchi and the Santhal Parganas were completed during the year. The operations in Ranchi were originally started with the object of discovering and removing the causes, economic and agrarian, which had led to the Birsa rising of 1901. Upon the facts collected in the earlier part of these operations, the Chota Nagpur Landlord and Tenant Procedure Act of 1879, was amended in 1903, mainly with the immediate object of removing the special grievances of the Mundari khuntkattidars, and defining and protecting their status. The immediate result of the mitigation of these grievances was the disappearance of the agrarian agitation which had prevailed in the Munda country for many years and had, from time to time led to outbreaks of violence, of which the last occurred in 1901. With the progress of the settlement operations, the materials were accumulated for a general revision of the local agrarian law, which was effected by the passing of the Chota Nagpur Tenancy Act of 1908. As a result of the application of this Act to the evidence afforded by the record-of-rights, the burdens of litigation and of general administration have decreased enormously, and there is now abroad a feeling of security in the enjoyment of agrarian rights.

8. The operations in the Santhal Parganas were begun in the autumn of 1898, and, during the 12 years over which they extended, maps and records have been prepared for over 5,000 square miles. The experience gained has led to the passing of three Regulations to amend the Santhal Parganas Settlement Regulation III of 1872, and Rent Regulation II of 1886. The rent of every tenant and headman in this large area has been settled, and the respective rights of landlord, headman and raiyat in every village have been clearly defined. Government, as the proprietor of the Damin-i-Koh estate, has gained an increase of revenue amounting to about Rs.90,000 at an expenditure of 2¼ lakhs of rupees; and private proprietors have also obtained material enhancements of their rent-rolls by the assessment of new lands reclaimed since the first settlement. Rent rates are nevertheless still low. The fact that the rents settled have, in all cases, been cheerfully paid shows that the new assessment is moderate. The system of administration in the Santhal Parganas is peculiarly dependent on the record-of-rights, and in this respect it is now admirably equipped.

9. During the past year the work of revision of the survey and record-of-rights in Orissa was extended to the district of Puri, and the total area now covered by the operations is 5,173 square miles. The progress made is satisfactory, and it is expected that the net cost will not much exceed the estimate of 1908. Disputes between landlords and tenants regarding rents of reclaimed lands were mostly settled amicably at attestation, and the cases of this nature instituted under Section 105 of the Bengal Tenancy Act were also usually settled by compromise.

10. The experiment in annual maintenance of the record, undertaken in the Sadar subdivision of the District of Balasore in the previous year, was extended to other parts of the district, and covered an area of 1,600 square miles. The Director of Land Records is of opinion that, if a trustworthy and properly attested record of annual changes is to be prepared, the present staff must be greatly increased, and that the cost will then be prohibitive. No final decision has been reached regarding this important question.

11. The field work of the land records staff in Sambalpur was, on the whole, satisfactory. The mutation offices at Bettiah, Mahnar and Hajipur, established under the Land Records Maintenance Act of 1895, continued to be unprofitable and unsuccessful; and the question of their abolition should now be considered. The maintenance of estate records was fair in Government

estates, but was unsatisfactory in Wards' estates. The check of rent-rolls appears to have been adequate in both classes of estates. The inspection and maintenance of boundary marks have improved greatly, and the work done during the year was satisfactory in almost all cases.

12. The charge of the Survey Department was held by Lieutenant-Colonel R. T. Crichton until the 23rd April 1910, when he went on leave for six months, and was succeeded temporarily by Captain R. Foster, Assistant Director of Surveys. The Settlement Department was under the control of Mr. H. McPherson throughout the year, except for three months during the second half when he was on leave, and Mr. J. Reid, I.C.S., Settlement Officer, Chota Nagpur, acted for him. The Lieutenant-Governor in Council desires to acknowledge the services of all these officers and also those of Messrs. H. Ll. L. Allanson, Murphy, Sifton, Hubback and Taylor, who were in charge of settlements. The zeal and high standard of efficiency and co-operation by which the work of the survey officers and settlement officers has been long marked have been well maintained during the year.

ORDER.—Ordered that the Resolution be published in the *Calcutta Gazette*, and that copies of it, with copies of the two reports, be submitted to the Government of India.

By order of the Lieutenant-Governor in Council,

J. G. CUMMING,

Secretary to the Government of Bengal.

No. 948L.R.

COPY, with copies of the two reports, forwarded to the Surveyor-General of India, for information.

No 949L.R.

COPY, with a copy of the Survey Report, forwarded to the Municipal Department of this Government, for information.

No. 950L.R.

COPY, with copies of the two reports, forwarded to the Appointment Department of this Government, for information with special reference to paragraph 12 of the Resolution.

By order of the Lieutenant-Governor in Council,

H. A. F. LINDSAY,

Under-Secretary to the Govt. of Bengal.

CALCUTTA,
The 25th February 1911.

B. S. Press—25.2.1911—68190—691—G. A.

ANNUAL REPORTS

ON

SURVEY AND SETTLEMENT OPERATIONS

BY THE

DIRECTOR OF LAND RECORDS, BENGAL,

AND THE

DIRECTOR OF SURVEYS, BENGAL,

FOR THE

YEAR ENDING 30TH SEPTEMBER 1911.





CALCUTTA:
BENGAL SECRETARIAT BOOK DEPÔT.
1911.

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REPORT

OF THE

DIRECTOR OF LAND RECORDS, BENGAL.

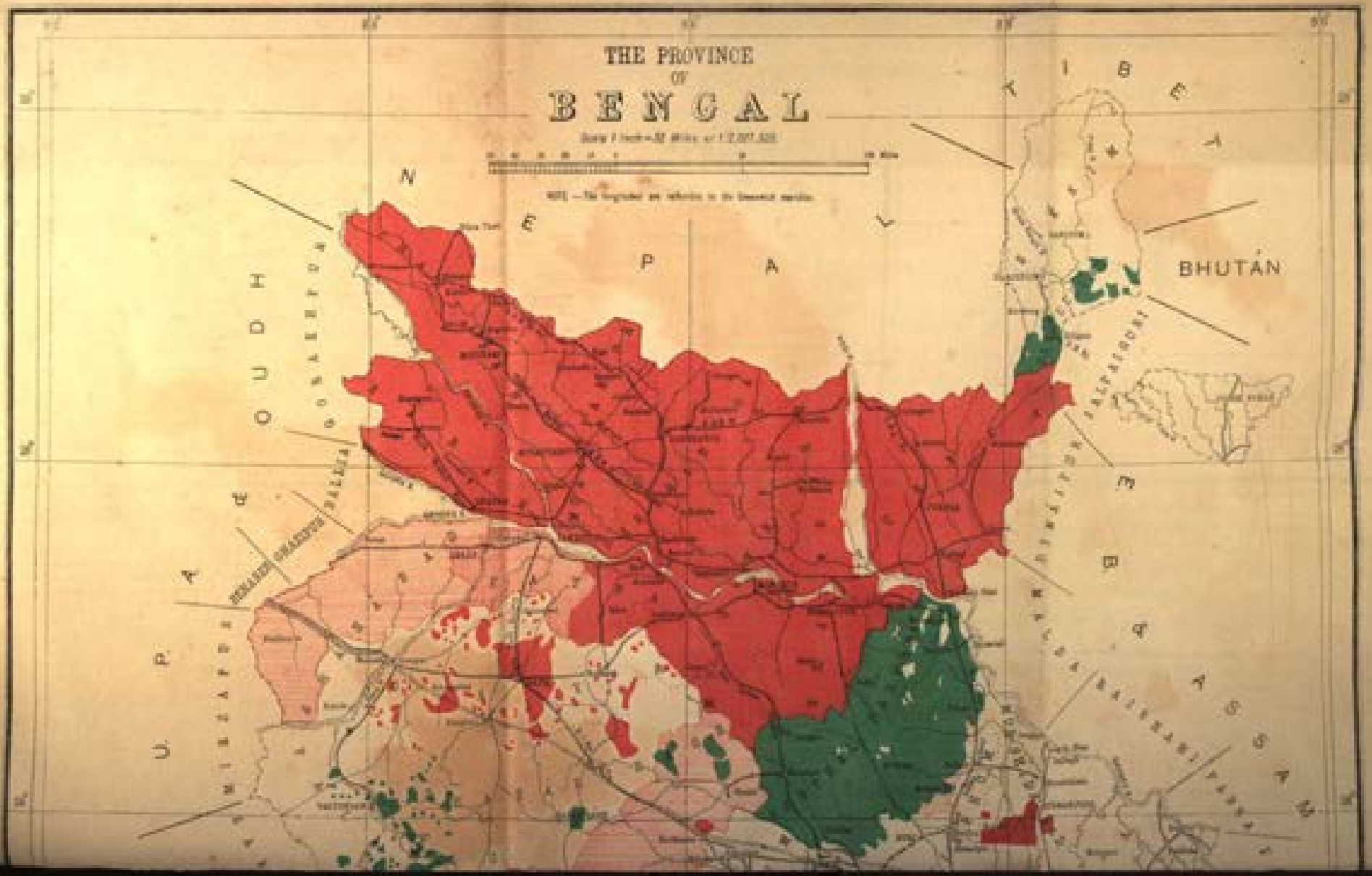
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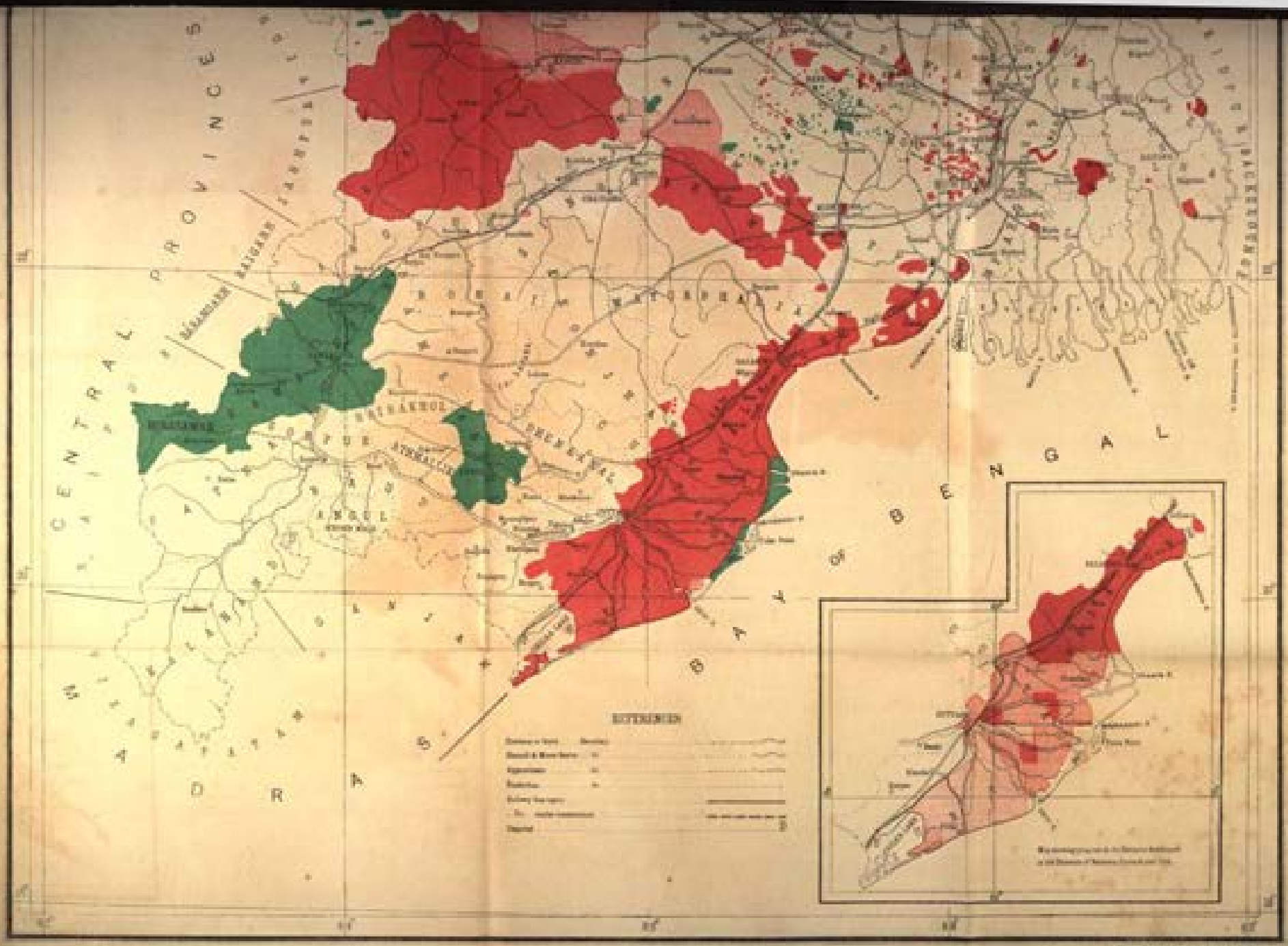
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SETTLEMENT MAP




CENTRAL PROVINCES
BENGAL
BAY OF BENGAL
ARABIAN SEA
BOMBAY
MADRAS
HYDERABAD
MYSORE
BERAR
KHANDESH
AHMEDNAGAR
SHOLAPUR
KOLHAPUR
BELGAUM
KANARA
SOUTH KANARA
NILGIRI HILLS
PALGHAT
MALABAR
CALICUT
CANNANORE
TELLICHERRY
MANGALORE
UDIPI
KARWAR
GOA
PONDICHERRY
KARAIKAL
MAHE
YANAON
CUDDALORE
PORTO NOVO
TRANQUEBAR
NEGAPATAM
TANJORE
TRICHINOPOLY
PUDUKKOTTAI
MADURA
TINNEVELLY
TUTICORIN
RAMNAD
SIVAGANGA
TRAVANCORE
COCHIN
KOLLAM
ALLEPPEY
KOTTAYAM
ERNAKULAM
TRICHUR
PALGHAT
MALAPPURAM
KOZHIKODE
WYNAAD
COORG
KOLAR
BANGALORE
SALEM
COIMBATORE
ERODE
KARUR
DINDIGUL
PERIYAKULAM
VIRUDHUNAGAR
SATTUR
KOVILPATTI
SRIVILLIPUTTUR
TENKASI
NAGERCOIL
KANYAKUMARI
PALK STRAIT
GULF OF MANNAR
PAMBAN
RAMESWARAM
ADAM'S BRIDGE
KEYS
Bombay
Madras
Calcutta
Hyderabad
Mysore
Berar
Railways
Roads
Rivers
Boundaries
Capitals
Ports
Railway Stations
Towns
Villages
Scale
Compiled and printed in I.G.O.S.

DEPARTMENT OF LAND RECORDS, BENGAL.

No. 4676.

FROM THE HON'BLE MR. H. McPHERSON, I.C.S.,
Director of the Department of Land Records, Bengal,

TO THE SECRETARY TO THE BOARD OF REVENUE, L. P.,
LAND REVENUE DEPARTMENT.

Dated Calcutta, the 15th December 1911.

SIR,

I HAVE the honour to submit the following report on the survey and settlement operations conducted under the supervision of this Department during the year ending the 30th September 1911.

CHAPTER I.

GENERAL SUMMARY AND GENERAL REMARKS.

Extent of the year's operations

2. Survey and settlement operations were in progress during the year in 15 districts of the Province. The area cadastrally surveyed was 3,378 square miles. Preliminary records were written for the same area. Records were prepared for attestation in 3,587 square miles, attested in 5,815 square miles and finally published in 5,003 square miles. The rents of 66,465 tenants were settled. The expenditure of the year amounted to Rs. 14,03,068.

Total area settled in the Province up to 30th September 1911.

3. The total area for which a record-of-rights has now been completed under the control of the Department is 64,805 square miles. Of this, 3,567 square miles excluding Orissa revision work were completed during the year under report. Progress during the last twenty-five years has averaged 2,592 square miles a year.

I have made an attempt this year to ascertain by divisions what are the total areas (*a*) completed in each district in survey and record or settlement under the Regulations, (*b*) covered by topographical or forest surveys, and (*c*) remaining to be dealt with. The figures, so far as available from settlement reports and information supplied by District Officers, are tabulated in Appendix XII. They do not agree with the figures mentioned above, but I have not altered the latter, as the figures in Appendix XII include areas surveyed and settled apart from the working of this department, and, in any case, will have to be re-scrutinized before they are finally accepted. The figures show that out of 116,175 square miles of the Province 49,732 square miles remain to be dealt with.

Future programme.

4. Reference was made in paragraph 4 of the previous year's report to the proposals that were submitted for the extension of revision operations to North Bihar, for the reduction of the Bihar party and the commencement of operations in Midnapore, and for an increase in the allotment of gazetted officers to settlement work. The Secretary of State has sanctioned the proposals of the Local Government with

regard to all these projects, except the North Bihar revision settlement. The North Bihar programme has been held in abeyance pending disposal of a reference regarding the application of section 105 of the Bengal Tenancy Act to the area. The future of the general settlement programme of the Province hangs upon the settlement of this question.

Settlement staff.

5. The largest number of Settlement and Assistant Settlement Officers employed during the field season was 9, and 118 against 8 and 126 of the preceding season. The sanction of the Government of India to an increase in the cadre of the Provincial and Subordinate Executive Services to meet the requirements of settlement work was received late in the year, and it is now being considered in what manner the orders shall be given effect to.

Final Reports.

6. During the year considerable progress was made in final report-writing. The reports on the operations in Dihi Bhadra (Khulna), Parikud, (Puri), Fatehsingh and other estates of Murshidabad, and the Sambalpur Town Mahal were submitted to the Board. Mr Reid has sent in the final reports of Ranchi and Dhalbhum; the report on the third programme of the Sonthal Parganas has been received from Mr. Allanson and the Bhagalpur report from Mr. Murphy. All these reports with their reviews are now passing through the press and will be submitted shortly. The final report on the Midnapore operations was also received from the late Settlement Officer, Babu Rampada Chatterji, before the close of the year and has been sent to the press.

Maintenance of Jurisdiction lists and maps.

7. During the year twelve proposals for alterations in thana and police-station jurisdictions were received for examination. The total number of jurisdiction notifications issued was eighteen, of which nine related to changes both in thana and police-station jurisdictions. The more important of the changes sanctioned were the wholesale revisions of the thana and police-station arrangements in the districts of Ranchi and Puri. In the case of the first-named district, among other changes, the police-stations were declared to be thanas for all purposes of administration.

Training of junior Civilians.

8. Of the seven officers who according to the standing orders were liable to training in survey and settlement work during the year, Messrs. Robertson, Middleton, Klingenstein, Duncan and Milsom were attached to the Shahabad Camp for a course of instruction. Messrs. Johnston and Williams were unable to attend, the former on account of illness and the latter on account of deputation to Census work. The training imparted by the Settlement Officer was careful and thorough, and the knowledge gained by the junior Civilians was tested at the close of the course by a searching examination paper. The results of the examination were creditable to all concerned, and showed that an intelligent interest had been taken in the various branches of survey and settlement work.

Training of Munsifs.

9. Six Munsifs, who were deputed to settlement in October 1909, completed their training and reverted to judicial duty in April 1911. All six officers are reported to have worked satisfactorily and to have profited from their deputation. Two of them, Babu Tulsi Das Mukherjee in Chota Nagpur, and Babu Surendra Nath Mukharji in Bihar, displayed special aptitude for the work. Six more Munsifs were deputed for training from October 1910 and have made a promising start.

Training of the district Kanungos.

10. Six district Kanungos were deputed by the Commissioners of Divisions for training in survey and settlement work. Four were sent to Shahabad and two to Chota Nagpur. They received a practical training in all branches of survey and settlement work during their deputation and were awarded certificates of proficiency at its termination.

Settlement Rules.

11. Reference was made in paragraph 10 of last year's report to proposed modifications of the Tenancy Act Rules which would enable draft and final publication of the records to be made at convenient centres under the supervision of Assistant Settlement Officers. The proposed modifications have been given effect to, and the innovation has proved a success wherever it has been tried.

12. The new Chapter IIA of the Bengal Cess Act IX of 1880 which enables cess revaluation to be carried out in combination with settlement work was applied for the first time in Bengal to the district of Hazaribagh. The Settlement Officer of Chota Nagpur drafted working rules which were published in Notification No. 4474 A of the 31st December, 1910. The work has been conducted successfully for one season and the rules will be revised in the light of the experience thus gained. It has been decided by the Board that the provisions of the section shall be applied in Gaya and Midnapore when the operations reach a suitable stage in these two districts.

Cess revaluation work.

13. The subject of agrarian legislation for Orissa was referred to in paragraph 11 of last year's report. The Government of India have passed orders on the proposals that were submitted to them, and the Orissa Tenancy Bill has been introduced in the Bengal Legislative Council. The Bill will be taken up during the present cold weather and is expected to become law before its close. Orissa will then be provided with a complete Tenancy Code of its own.

Agrarian legislation in Orissa.

14. A few points of special interest connected with the working of the Bengal Tenancy Act have received attention during the year—

Points of interest connected with the working of the Bengal Tenancy Act.

(*a*) It has been ruled by the High Court that a section 106 plaint dealing with a dispute between landlord and landlord must be decided solely on the basis of possession and may not enter into the question of title. The ruling appears to be contrary to the intention of the legislature and should be considered when the Act comes up again for amendment.

(*b*) There have been several rulings of the High Court to the effect that the presumptions contained in sections 20 (7) and 50 (2) of the Bengal Tenancy Act do not apply in rent suits, because rent suits are not proceedings under the Act. The Act should be amended to make it clear that the presumptions apply in all suits and proceedings between landlord and tenant.

(*c*) The applicability of the presumption of section 50 (2) of the Bengal Tenancy Act to raiyati holdings in temporarily-settled estates has been considered on a reference by the Settlement Officer of Shahabad. It is probable that the presumption was not intended to apply in temporarily-settled areas, but the point should be made clear by the substitution of the word "tenancy" for "tenure" in section 191 of the Act.

(*d*) The non-applicability of section 116 of the Bengal Tenancy Act to Government lands acquired by purchase or otherwise prior to the enactment of the Bengal Land Acquisition Act, 1894, and still utilized for public purposes, has led to considerable difficulty in dealing with the side lands of the Grand Trunk Road in Hooghly. An addition should be made to the section in order to extend to such lands the exemption from accrual of occupancy rights, which applies to lands acquired under the Act after 1894.

15. It appears from the extracts from their Annual Reports that have been forwarded to me by all Collectors that wherever cadastral maps and settlement records exist, they have been freely consulted and found to be invaluable in criminal cases and in all branches of revenue work. The utility of settlement records in partition proceedings has been specially emphasized by the Collector of Saran, who writes as follows :—

Utilization of Land Records.

"Partition proceedings as a rule are based on the survey papers under section 49 of the Estates Partition Act. Effect is of course given to the changes that have taken place in estates under partition, and the survey record-of-rights is brought up-to-date before partition is made. The advantages derived from the settlement are—(1) no separate measurement of the estate has to be made nor has a separate record of existing rents and other assets to be prepared; (2) rent and boundary disputes have been reduced to a very considerable degree; (3) the arbitrary enhancement of rents on the part of the malika has been stopped. Owing to the settlement the duration of partition cases has been reduced."

The Deputy Commissioner of the Sonthal Parganas notes that the deposit of the settlement records in subdivisional record-rooms has largely increased their usefulness. The efforts which he has made to familiarize the subordinate courts of his district with the contents and use of the records merit special notice.

CHAPTER II.

[*See* Appendices I to VI.]

SETTLEMENTS OF LAND REVENUE.

Estates in Midnapore.

Area, 1,063 square miles; villages, 3,100; plots, 1,052,993.

16. *Programme.*—The Midnapore settlement embraces Government and temporarily-settled estates with an area of 601 square miles and permanently-settled estates with an area of 468 square miles. These estates occupy one-fifth of the entire district and are scattered over several thanas and parganas. Operations were first started in the Government and temporarily-settled estates in October 1903 under the supervision of Mr. J. H. Taylor who was succeeded in April 1907 by Mr. C. W. Hodson. Babu Rampada Chatarji took over charge in October 1909, and upon him has fallen the duty of completing the work and winding up the operations. He has brought this difficult and intricate settlement to a successful conclusion, and has submitted a comprehensive final report which is now in the hands of the Press.

17. *Case-work.*—Apart from the miscellaneous work connected with the closing of the operations, the chief item in the year's programme was the disposal of the section 105 applications of the Jhargram Ward's Estate. These cases, which were mostly against village *mandals*, were heard at great length by Maulvi Syed Dilawar Ali, Assistant Settlement Officer, and disposed of at the end of March 1911. Recovery of costs in the same estate also took up a portion of his time.

18. *Conclusion of old programme.*—The operations in these scattered areas of Midnapore have been protracted and tedious. It is perhaps sufficient to mention that they covered the troublesome Majnamutha, Jalamutha and Jalpai estates which have always given Government a maximum of trouble in their management and settlement.

19. *New district programme.*—With the conclusion of this programme there opens up a new programme which will complete the rest of the district within the next 8 or 9 years. Midnapore is the first of the deltaic districts to be taken up as a district settlement. Mr. McAlpin, I.C.S., who made the Sonthal enquiry three years ago in Birbhum, Bankura, and Midnapore, has been selected as Settlement Officer of the district operations. The first section of the district—about 900 square miles—was traverse-surveyed in the past field season and will be cadastrally surveyed and khanapuried under Mr. McAlpin's supervision in the present season.

Estates in Hooghly.

Area, 49·59 square miles; villages, 219.

20. *Programme.*—Several additions were made to the Hooghly programme during the year, and the operations now extend to nearly 50 square miles scattered all over the district. Of this area, about 5 square miles consist of Government and temporarily-settled estates and the remainder of zamindari estates. The operations continued to be in charge of Babu Mahendra Nath Gupta, Deputy Collector, and he had two assistant settlement officers to help him for portions of the year.

21. *Revenue Settlement.*—The operations in the Government and temporarily-settled estates were mainly under Regulation VII of 1822. The rent-question in the Chinsurah khas mahal was the subject of much discussion. In the end it was thought advisable to leave the rates untouched and to increase rents only on the ground of excess area. The form of lease to be granted in the case of altered rents was settled after careful consideration in the Board's No. 1552, dated 10th May 1911. A form of lease for the occupants of Grand Trunk Road side lands has given rise to a discussion that has not yet been closed. Some modification of section 116 of the Bengal Tenancy Act appears to be necessary, if these lands are to be kept clear of occupancy rights.

22. *Private Estates.*—In the remaining areas under survey and record the chief difficulties were connected with the identification of lands as between estate and estate, and with the separation of revenue-free lands from revenue-paying lands. Many of the applications were filed by purchasers at auction sales who could not get possession. Government was in this position as regards three estates, and the difficulties of identification have been fully illustrated in the Kanur and Pandua cases. Khalna village furnished an extraordinary tangle in the matter of revenue-free claims. Its section 103 A objections numbered 2,106. These have been disposed of with much tact by Maulvi Syed Dilawar Ali who has succeeded in effecting numerous compromises and settling the disputes of years.

23. *Case-work.*—The case-work of the Hooghly settlements has been unusually heavy, and many of the section 106 cases have had to be referred to the civil courts under the proviso to that section, as the parties added prayers for possession or raised complicated issues which were more suitable for disposal in the civil than the settlement court.

BICHITRAPUR ESTATE IN BALASORE.

Area, 5·56 square miles ; villages, 6.

24. *Progress.*—Rent-rolls of six villages were prepared under section 104 A (*d*) by the revision settlement staff and draft-published. After consultation with the Collector and the Commissioner an enhancement of two annas in the rupee on the existing rental was made.

CHAPTER III.

[*See* Appendices I to VI.]

PERMANENTLY-SETTLED ESTATES.

BIRBHUM DISTRICT (PORTION.)

Area, 136 square miles ; villages, 106 ; plots, 157,341.

25. *Staff.*—Mr. P. M. Robertson, Deputy Collector, was in charge of the operations. He was assisted throughout the year by Maulvi Ekram-ud-din, Assistant Settlement Officer.

26. *Programme.*—A small addition of 4 square miles was made to the programme. This had to be surveyed and khanapuried. The whole area of 136 square miles had to be attested and dealt with in the objection and settlement recess stages. The programme was practically completed.

27. *Attestation.*—The attestation work proved extremely difficult, but the Settlement Officer inspired the landlords and tenants with a keen interest in the proceedings, and the attendance at attestation was very satisfactory. The tenure-holders' *khewats* presented special difficulties, especially in taluk Nankar, where there has been much subinfeudation of a complicated nature, and there are numerous share-holders who have separated into groups, holding separate lands in each variety of interest.

It was impossible to ascertain at khanapuri the correct distribution of fields over the innumerable interests and shares of interests which exist, because the work was done late in the season and attendance was very bad. The attestation officers had to unravel the skein at their camp tables, and the extent of the difficulty may be gathered from the fact that there were over 14,000 entries in the mistake lists and about 7,000 entries in the dispute lists. During my inspection visits I have had oral as well as eye evidence of the patience with which the task was accomplished by the Settlement Officer and his assistant.

28. *Rents.*—Most of the Bengali raiyats in the area have escaped enhancement of rents for the last 25 or 30 years. In the Sonthal chaks there is considerable variation. Some of these have avoided disintegration, and their rents have remained stationary since the last settlement. This is specially true of the estate of Kumar Protapendra Chandra Paure of Pakaur. Some other landlords have made enhancements which are fair, as they are justified by the extension of cultivation.

"There are on the other hand," writes the Settlement Officer, "several landlords who have done their best to grind down the Sonthal chakdars by enhancing rents excessively and at frequent short intervals. Bhuban Babu's patta was originally for seven years only; and these landlords have been systematically raising the rents at the end of every succeeding seven years, and taking registered kabuliyats from the chakdars. The effect of this has been that the rents of the raiyats have similarly been enhanced every seven years, for the chakdars could not pay the new rents unless they similarly raised the rents of the raiyats. The chief of these offenders are the landlords of Madna, Bhola and Santoshpur (thana Nalhati)."

The question of rent-settlement is still under consideration. If the landlords apply generally for settlement of rents both for the chakdars and their raiyats, the difficulty will solve itself. If they do not, it may be necessary to recommend the application of section 112 of the Bengal Tenancy Act. No settlement of the area will be satisfactory that does not include a universal settlement of fair rents.

29. *Alienation.*—Statistics have been compiled since the close of attestation to show to what extent the lands of aboriginal tenants have been passing into the hands of money-lenders and non-aborigines. These will be utilized to consider what measures, if any, are necessary to protect the aboriginal tenantry in the enjoyment of their ancestral holdings.

30. *Record-of-rights.*—It was found impossible to record the rights of chakdars in the ordinary forms used in Bengal Tenancy Act settlements. A special record was therefore devised on the analogy of the *pradhani* records of Dhalbhum and the Sonthal Parganas. It is hoped that the preparation and publication of this record will materially strengthen the position of the chakdars, who are neither raiyats nor tenure-holders as defined in the Bengal Tenancy Act, but something between the two.

31. *Objection cases.*—Objections under section 103 A averaged 37 to the square mile. Three-fourths of them were between landlord and tenant. They could not be taken up till the middle of May on account of the late closure of the attestation camps. All were disposed of by the end of August.

32. *Agrarian conditions.*—The Settlement Officer observes that where the raiyats are oppressed by their landlords, the raiyats are mainly Sonthals.

"This is especially so," he writes, "in the case of the Mohant of Mollarpur. I was struck by the very large number of sales for rent-arrears in his estate. In most of the cases he has himself purchased the lands at the auction sales; and sublet them in *bhauli* to the original owners usually. These *bhaulidars* have now been recorded as settled raiyats, and have been recommended to file petitions under section 40 for mutation of produce rent. This they have done, much to the distress of the Mohant, whose agent says that about Rs. 10,000 worth of paddy is received from the *bhaulidars* and *thikadars* every year."

Mokimpur Estate in Jessore.

Area, 26 square miles; villages, 20; tenants, 11,288; plots, 36,018.

33. *Progress.*—The Settlement Officer, Babu Akshay Kumar Mukharji, resumed work in this settlement on the 27th January 1911. His programme

consisted of attestation, draft publication, disposal of section 103 A objections, office work and final publication for the whole area. Attestation and draft publication and the bulk of the objection work have been completed and office work is well advanced. Field work was much retarded at first by the indifference and passive resistance of the tenants and later by unfavourable weather. The tenants would not attend well, as they were evidently interested in perpetuating the chaotic state of affairs which obtained prior to the inception of the operations, and it was only by his tact and the judicious levy of fines that the Settlement Officer overcame the opposition. Subinfeudations are not as numerous here as in Dihi Bhadra of the adjoining Khulna district, but instances have been found where they exist up to the seventh degree. An interesting feature of this area is that under-raiyats have been largely found to possess occupancy rights and the right of transfer. As most of such under-raiyats' holdings are in respect of portions of raiyati holdings, section 48 of the Bengal Tenancy Act could not conveniently be applied. Owing to want of suitable accommodation in the locality, recess work was conducted at the head-quarters of the Khulna district.

BIHAR SETTLEMENT.

34. *Staff and extent of operations.*—The Bihar operations during the year covered the districts of Bhagalpur (South), Monghyr (South), Patna and Shahabad. From the beginning of the field season Shahabad was constituted a separate charge under Mr. J. A. Hubback, I.C.S., and the earlier districts remained in the charge of Mr. P. W. Murphy, I.C.S. Mr. Murphy had a staff of Assistant Settlement Officers which was gradually reduced from 14 to 5. Mr. Hubback had the assistance of two Covenanted officers, Messrs. Shettle and Rowland, and of Babu Nilmoni Dey, as Assistant Settlement Officers in charge. The other Assistant Settlement Officers employed varied in number from 29 to 19. Mr. Hubback was on leave for six months during the recess season, and Mr. Shettle officiated for him.

South Bhagalpur.

1,632 square miles; 2,568 villages; 150,732 tenants; 1,267,098 plots.

35. *Completion.*—Most of last year's balance of costs has been realized, but a sum of Rs. 4,436 still remains due from the Banaili Estate. The final report is ready and will be submitted shortly to the Board.

South Monghyr.

2,285 square miles; 2,017 villages; 318,877 tenants; 2,102,226 plots.

36. *Programme.*—It was noted in last year's annual report that the only serious item of work outstanding was the settlement of Babu Sukan Singh's villages under section 112 of the Bengal Tenancy Act. There was also a small balance of case work and recovery to complete.

37. *Babu Sukan Singh's villages.*—The work in this area was taken up by Babu Karali Charan Ganguli, an experienced Assistant Settlement Officer. It was the first time that the provisions of section 112 had been applied to any estate in Bengal, and the task of carrying through a rent settlement under the section was found to bristle with difficulties. There was sufficient evidence to prove that cash rents had been illegally enhanced before the district operations were begun, and these could be cut down without difficulty; but there was much dispute regarding the system of produce rent, and simultaneously with the rent settlement operations the landlord took steps in the Civil Court to fortify his position with regard to produce rents and generally to nullify the effects of the rent settlement. He obtained a temporary injunction from the Civil Court to prevent the disposal of the applications that were filed by the raiyats under section 40 of the Act, and he also got decrees for arrear rent against

the raiyats of many villages. Several attempts were made to effect a compromise under section 109 C that would be alike beneficial to landlord and tenants, but they fell through on account of the refusal of the latter to give way on the subject of their produce rents. The officers of settlement have now completed the preparation of the new rent-roll, and all appeals under section 104 G have been disposed of. The parties have been left to fight out the question of arrears, and the disposal of the pending section 40 applications has been taken up.

The difficulties encountered in these section 112 proceedings prove the necessity of some amendment of the section which will give the Settlement Officer fuller power to deal with produce rents and with arrears. The section prescribes the procedure laid down in Part II of Chapter X for the settlement of rents in Government and temporarily-settled estates, but these present no such difficulties as arise in areas where the relations of landlords and tenants are strained to breaking point. A settlement of rents that takes no notice of arrears and leaves the raiyats at the mercy of the landlord in the Civil Court cannot be considered satisfactory. It is for this reason that when we have settled rents by mutual consent under section 109 C we have almost invariably made a simultaneous adjustment of arrears.

38. *Case-work.*—Rents were settled under section 105 for 2,311 tenants of other areas. The average enhancement allowed on the grounds of excess area and rise in prices amounted to 10 per cent.

The remaining section 106 case-work was completed. About 1,500 section 40 cases were disposed of. The remainder, with the exception of those relating to Babu Sukan Singh's villages, were transferred under the orders of the Board to the Collector of Monghyr, and have been heard by special officers deputed from the Settlement Department to work under the Collector's orders.

The appellate work under section 40 has been heavy. More than 2,000 appeals were disposed of by the Settlement Officer during the year and 3,000 appeals are still pending.

39. *Recovery.*—The outstanding balance has been recovered with a small exception. Of the total demand 99 per cent. has been paid up, and the remainder is expected to be collected during the present field season.

40. *Completion of the district.*—The appointment of Settlement Officer has been extended for six months, and during this period Mr. Murphy will dispose of the pending section 40 appeals, complete the final report of South Monghyr, and finish the work that remains to be done in the Patna District.

PATNA.

1,938 square miles; 2,502 villages; 1,251,936 tenancies; 3,412,215 plots.

41. *Programme.*—The programme consisted of completion of office work, disposal of case-work under sections 105, 106 and 40 of the Bengal Tenancy Act, and recovery of costs.

42. *Case-work.*—In the settlement of fair rents under section 105 enhancements were allowed mainly on the grounds of rise in prices and excess area. The increase of rent averaged 11 per cent. The most important of the Section 106 cases were those brought to contest the finding of the attestation officers that *dahiak* is an illegal demand and not part of the rent. The cases were tried by Mr. James, I.C.S., and dismissed. The appeals made to the Special Judge are still pending.

Over 3,000 section 40 applications were disposed of and cash rents were fixed for 7,637 acres at an average of nearly Rs. 9 per acre. There are still more than 1,000 applications pending, and there is a heavy file of section 40 appeals to be dealt with by the Settlement Officer.

43. *Recovery.*—Eight lakhs of rupees were recovered during the year, the collection averaging 97 per cent. The raiyati demand was practically paid in full. The balance due from landlords will be collected this field season.

44. *Conclusion of operations.*—Mr. Murphy expects to wind up the operations by the end of March 1912. Materials are being collected for the final report, which will be drafted by Mr. Murphy and completed, if necessary, by Mr. Hubback, Settlement Officer of Shahabad.

Shahabad.

4,191 square miles; 6,029 villages.

Survey.

45. *Programme.*—The field programme consisted of the cadastral survey and khanapuri of 1,553 square miles in thanas Mohania, Kharghar and Bhabua, and the recess programme, of the preparation of the maps and records of the same area for attestation. The whole of the programme was completed.

46. *Survey and Khanapuri.*—Of the total area of 1,553 square miles 492 square miles consisted of the hill country in the south of Bhabua thana. Cultivation in this area was sparse and scattered, and though the survey work was difficult on account of the natural features of the country, progress was rapid and the average cost-rate low. The total number of plots khanapuried was 917,093, averaging 588 to the square mile. The average was 825 in the plains and 95 only in the hill area. The personal and independent check of survey amounted to 3·27 linear miles per square mile, while 18 per cent. of the plots was checked at khanapuri. The percentage of check in both branches was fully adequate.

An area of 16·65 square miles in thanas Buxar, Dumraon and Piro was topographically surveyed for purposes of standard mapping. The Bhabua Municipality was surveyed in detail and a town survey of the Dumraon Municipality has been undertaken at the request of the commissioners. The Ghazipur maps of 1878-79, the Benares maps of 1882-83 and the Mirzapur maps of 1877-88 were utilized for district boundary comparison. Little difficulty was experienced in their agreement.

47. *Boundary disputes.*—Boundary disputes in the hill area were decided in accordance with the revenue survey maps, except in cases where the circumstances were exceptional. Khas mahal disputes gave more trouble than others, because the local subordinates made extravagant claims and adopted reprehensible methods of supporting them.

48. *Internal disputes.*—The average number of internal disputes in the plains area fell from 40 per square mile in the previous year to 27. The population was less contentious, and a smaller portion of the area belonged to the Dumraon Raj.

Settlement.

49. *Programme.*—The programme consisted of the attestation, draft publication and disposal of section 103A objections in an area of 1,498 square miles in thanas Buxar, Dumraon, Shahpur, Piro and Bikramganj. There remained also to be disposed of 12,398 status objections of Arrah thana which, under special orders, were received free of charge in the previous year. The whole of the work was duly completed.

50. *Attestation.*—The chief difficulty of attestation in the northern circles of the attestation area was, as in the previous year, the question of *guzashta* rights. I do not propose to reiterate what was said on the subject in paragraph 46 of last year's Annual Report. The whole question has been very fully dealt with in the report on the Bihar Landholders' memorial, which was submitted some time ago to the Board. It will be enough to note here that during the attestation year 45,711 raiyats out of a total of 266,163 were recorded as raiyats at fixed rates. In four of the northern camps the proportion was nearly 50 per cent. of the whole, and they alone accounted for 37,079 out of the 45,711 tenancies recorded as held at fixed rates.

In produce rents the share of the landlord was generally found to be half the produce, though a common system in the case of transplanted rice was for the landlord to take only three-*eighths*. As regards cash rents, illegal enhancements were not a common feature of the area under attestation. Rent disputes were most frequent in the villages of petty proprietors who

had no regular papers. There was reason to suspect both in major and minor estates that existing rentals included abwabs, but the amounts, where detected, were found to be small, and the tenants do not as a rule object to their payment.

Rents were settled on agreement under section 109 C for 1,216 tenancies, and the amount of rent affected was Rs. 16,608. Some long-standing disputes were satisfactorily cleared up with the help of this section, which in the hands of a tactful officer can be used with great advantage to all parties.

The record of lands held by certain Europeans in the area presented some special difficulties which were successfully overcome.

The transfer statistics of the area are of considerable interest, as showing the value attaching to the guzashta right. During ten years about 8·5 per cent. of the total raiyati area has been the subject of mortgage, and about 1·3 per cent. only has been transferred by sale. The advances on mortgages have averaged Rs. 2·38 per acre, while the average selling price has been Rs. 104 per acre for entire holdings and Rs. 194 per acre for part holdings.

51. *Objections under section 103A.*—The work under section 103 A was exceptionally heavy, the number of objections, inclusive of those filed free of cost in the previous year, amounting to nearly 80,000. Their disposal kept most of the camps out in the field till the end of July, and one camp continued at Dumraon till the close of the year. No less than 31,435 cases were status objections, 22,974 filed by landlords and 8,461 by tenants. The former were successful in 11 per cent. of their cases and the latter in 20 per cent.

52. *Relations of landlord and tenant.*—Mr. Hubback makes the following remarks on this subject:—

"These are on the whole good. The management of the Raj has been for a great number of years lenient, and many cases were brought to light where, although tenancies had been sold up for arrears of rent, the defaulters were still allowed to remain on the land without paying any rent at all. In such cases where the statutory period of twelve years had not elapsed, the occupiers were recorded as being in adverse possession, and the period of such possession was noted. In some villages belonging to the Raj raiyats were found to be in the habit of making payments of rent once in four years.

The Dumraon Raj is by far the largest landlord in the guzashta area.

Mr. Mylne of Behea is the proprietor of large temporarily-settled estates referred to in last year's report. His property consists of the jungle mahal and a number of villages confiscated during the Mutiny. A settlement of revenue for this estate will take place during the coming year. Relations between landlord and tenant in this estate are on the whole good, and Mr. Mylne maintains an admirable system of zamindari papers. There was some friction during attestation owing to the desire of tenants to be recorded at fixed rates. Their position was generally not tenable, as their claims were easily disproved from the landlord's papers. Even in the jungle mahal villages, which are well known to have been brought under cultivation since the Mutiny, raiyats freely claimed to hold at fixed rates. There were difficulties in attesting rents in some villages belonging to Babu Harihar Prasad of Dumraon, son of a former Dewan of the Dumraon Raj. It seems that the Dewan had succeeded in enhancing rent in his own villages, although such a course was not found practicable in the Raj. These enhancements lay at the root of the present difficulties. Mr. Solano's relations with his raiyats were not always found to be of the most amicable nature owing to disagreement relating to lands which formerly grew indigo and are now claimed as raiyati both by landlord and tenant. However, speaking generally, it may be stated that the relations between tenant and landlord are good."

53. *Rent receipts.*—I desire to draw the special attention of the Board to the remarks of the Settlement Officer on the working of section 58 of the Bengal Tenancy Act. He writes as follows:—

"It was found that petty proprietors frequently fail to grant receipts for rent Proceedings under section 58 of the Bengal Tenancy Act were drawn up in 45 cases and forwarded to the Collector. The results of 25 cases have been communicated to us by the Collector. In two cases a fine of Re. 1 was inflicted, and in two cases one of Rs. 3. In twenty cases fines ranging from Rs. 5 to Rs. 10 were imposed, and in one the landlord was let off with a warning. The punishments inflicted for the offences, which are responsible for most of the trouble between landlord and tenant in Bihar seem to be wholly inadequate, and unless there is a prospect of more drastic punishment, it is waste of time to send up the cases."

I have frequently commented in the annual reports on the flagrant and wholesale violation of the provisions of section 58, which is practised in South Bihar. I last drew attention to the subject in the report on the Bihar Landholders' memorial. The practice of South Bihar in this matter is the cause of much of its agrarian trouble, and is in marked contrast to our experiences in the jungly tracts of Chota Nagpur where landlords have been taught by the judicious working of the corresponding section of the Chota Nagpur Act to give regular rent receipts to their raiyats. It is most discouraging to the Settlement Officer to find contraventions of the Act met with slight punishments which can only act as incentives to the continuation of the offence.

Killa Bishunpur in Cuttack District.

Area, 17·44 square miles; villages, 44; plots, 24,353.

54. *"rogress.*—The attestation and final publication of this area were completed during the year. There was much dispute between the landlords and tenants on the question of rent, and in the absence of any better evidence the rents were attested mainly on the basis of road-cess returns, a large area being left recorded as "liable to assessment." For the assessment of this landlords are at liberty to have recourse to section 105. It may have to be considered whether section 112 should not be applied to the area in order to finally dispose of the long-standing dispute about rents.

Villages Arillo and Ratagarh in Cuttack District.

Area, 2 square miles; villages, 2; plots, 2,664.

55. *Progress.*—The records in respect of these two villages of Killa Patia which were attested last year were completed and finally published.

The Jagir Mahals of Puri district, including Parikud.

Area, 140 square miles; villages, 128; tenants, 13,893; plots, 57,927.

56. *Completion of operations.*—The work that remained to be done was the disposal of 5,500 cases under section 105 of the Bengal Tenancy Act, previously struck off under section 188 on the ground of defect of parties, but subsequently restored by the Special Judge who held that, as section 188 of the Act had not been extended to Orissa, it did not apply to these cases. The Settlement Officer took up one of the cases thus restored as a test case and, relying on rulings under the old rent-law, found that the cases could proceed if the non-joining party were made a *pro formâ* defendant. His finding was upheld on appeal by the Special Judge. The Settlement Officer then disposed of the remaining cases between November 1910 and March 1911. The small co-sharer, who refused to join in the applications, took the order of the Special Judge on second appeal to the High Court, but the appeal was dismissed. The rent-settlement work begun in the previous year was thus extended successfully to the whole of the jagir mahals. In forwarding the Settlement Officer's final report, I made the following remarks on this subject:—

"*Paragraph 6.*—The most important feature of the operations was the fact that they included a complete rent-settlement of the tract, and not only were all existing cash-rents readjusted, but also all produce-rents were commuted to cash-rents, and rents were settled for the first time for a large number of paiks and others who were performing no useful service, but held their jagir and chakran lands on an insecure tenure which was as unsatisfactory to themselves as to their landlords. As a result of the resumption proceedings and rent-settlement, they have acquired occupancy rights."

The report has been submitted to the Board, and the work of the Settlement Officer has received the Board's special commendation.

CHOTA NAGPUR SETTLEMENT.

57. *Staff and extent of operations.*—Mr. J. D. Sifton, I.C.S., was Settlement Officer throughout the year, with the exception of a few days. Messrs. W. H. Nelson, I.C.S., T. W. Bridge, I.C.S., and J. A. Sweeney, I.C.S., were in charge of survey and khanapuri operations throughout the field season. Messrs. Nelson and Bridge reverted to general duty at its close, and Mr. Sweeney was retained for recess work. The number of other Assistant Settlement Officers varied from 31 in the field season to 18 in the recess.

RANCHI DISTRICT.

7,104, square miles; 3,924 villages; 3,68,059 tenants; 3,808,612 plots.

58. *Programme.*—The programme consisted of (1) settlement recess-work connected with the remaining records of the previous year; (2) computation of costs for an area of 2,332 square miles and recovery of costs for an area of 1,130 square miles; (3) disposal of suits under sections 87 and 111 (8) and applications for settlement of fair rents under section 85, Chota Nagpur Tenancy Act, for an area of 1,130 square miles; and of applications under section 94 in Gumla subdivision pending from the previous year; (4) final publication of records in the last area (1,202 square miles) and of the records of landlord's privileged lands prepared under section 119 for the area completed prior to 1908. The whole programme was carried out with the exception of some case-work and fair rent settlements.

59. *Recovery of costs.*—Of a total demand for the year amounting to Rs. 2,23,285, Rs. 2,11,139 was collected. The balance is due mainly from the Maharaja and certain petty landlords and will be realized this year. Only Rs. 35 remained to be collected from raiyats.

The Settlement Officer anticipates that against a total district expenditure of 16¼ lakhs of rupees, there will be a total recovery from landlords and tenants of nearly 11 lakhs. The State bears one-fourth of the costs, and the Government of India promised to meet deficit recovery up to a limit of 2¼ lakhs. Recoveries will be well within this margin.

60. *Completion of the district.*—The only items of work that remain to complete the district are recoveries in the last area of 1,202 square miles and the settlement of fair rents on some applications which have been filed under sections 85 and 94 of the Act. The Settlement Officer has recently been in consultation with the Commissioner and myself regarding the principles that should be followed in settling fair rents. The pending applications will be taken up as soon as he has come to a decision on the subject. Recovery work will be completed during the present field season. The final report has been prepared by Mr. J. Reid, I.C.S., late Settlement Officer, who was placed on special duty for the purpose last cold weather. It is still in the press, but will be submitted shortly with my review to the Commissioner.

SINGHBHUM.

61. *Programme.*—The operations in this district covered the estates of Dhalbhum, Monoharpur (in the Kolhan) and Porahat.

62. *Dhalbhum Rent Settlement.*—The chief work of the year was the settlement of fair rents throughout the greater portion of the pargana. With this work was combined the commutation of produce rents, wherever applications were filed. The Midnapore Zamindari Company applied for settlement of fair rents and commutation of produce rents throughout the area managed by them khas or through pradhans. In the area held by tenure-holders applications for commutation were filed mainly by the raiyats. The area which was not affected by either work was only about one-third of the pargana. The results of the

combined fair rent settlements and commutations may be represented briefly as follows:—

Total previous rent of the Pargana.	Total settled and recorded rent.		
	For first five years.	For second five years.	For third five years.
Rupees 1,36,236 + 26,785 maunds of paddy + 6,268 maunds of rice.	Rupees 1,82,912 + 6,737 maunds of paddy + 861 maunds of rice.	Rupees 1,89,220 + 6,737 maunds of paddy + 861 maunds of rice.	Rupees 1,93,627 + 6,737 maunds of paddy + 861 maunds of rice.

If the paddy be valued at Re. 1 per maund and the rice at Rs. 2 per maund, then the settled and recorded rents show an increase, over the previous rents, of 9 per cent. for the first period, 12½ per cent. for the second period, and 15 per cent. for the last period. It is of course the commutation of produce rents that has lowered the average. In those parts of the pargana, where cash rents only were paid before, the cash rents, fixed by applying to the classified lands the previously existing rates, were about 50 per cent higher than the former rents. But in other parts the raiyats paid mixed—cash and produce—rents and, as the produce rents were commuted on the basis of the accepted cash rates for lands of the same class, the raiyats had their rents on the whole reduced. That these nominally reduced rents were acceptable to the bigger landlords is proved by the fact that the Midnapore Zamindari Company themselves applied for commutation. So much of the produce is intercepted by estate underlings where the produce rent system obtains, that it pays a big zamindar to have the system abolished and fixed cash rents, that are nominally lower, substituted for the produce-rents. On their combined fair rent and commutation applications the Zamindari Company obtained an aggregate enhancement of 38 per cent. The recorded rents, which were not settled under section 85 of the Act, cannot be altered for 15 years, so that the beneficial effect of the operations is not diminished by their exclusion.

63. *Recovery.*—The demand of the year, Rs. 1,21,918, was recovered in full except a small sum of Rs. 80. The total recoveries for the pargana are slightly in excess of the actual cost, but the accounts have not yet been finally made up.

64. *Completion of the settlement.*—The survey and settlement of pargana Dhalbhum have now been completed, and the final report has been submitted by Mr. John Reid. He and his successor must be congratulated on the successful conclusion of their labours. It is a most satisfactory feature of the settlement that it has included a general settlement of fair rents and a commutation of produce-rents. As far as rents are concerned, there can now be no dispute between landlord and tenant for a period of 15 years.

65. *Monoharpur.*—The records of Abhiram Tung's tenure, which has an area of 14½ square miles, were finally published during the year.

66. *Porahat.*—A record of landlords' privileged lands was prepared under Notification No. 2238 L.R., dated the 5th August 1910, for the estate of Porahat, which was surveyed and settled in 1906-07. The area recorded as privileged amounted to 1,577 bighas only.

MANBHUM.

Parganas Barahabhum and Patkum.

934 square miles; 859 villages; 59,340 tenants; 629,372 plots.

67. *Programme.*—The programme consisted of the attestation, case work, and settlement recess work of 298 square miles in pargana Patkum. It was successfully completed. The work presented no special features of interest that have not already been noticed in the case of pargana Barahabhum completed last year.

68. *Rent Settlement.*—A settlement of fair rents remains to be carried out for both parganas. Preliminary enquiries have been made by the Settlement Officer, but he has not yet decided what principles will be followed in settling rents.

69. *Costs.*—The question of apportionment of costs was dealt with in the course of the year, and it was settled that, as in Ranchi, there should be differential rates for the various classes of land, proportioned more or less to their varying productiveness. Computation is now in progress for Barabhum, and recovery work will be started in March 1912.

HAZARIBAGH.

Area, 6,911 square miles.

70. *Programme.*—The programme consisted of (1) cadastral survey and khanapuri of 1,806 square miles (field and recess); (2) attestation and draft publication combined with cess revaluation in 1,481 square miles; (3) case-work under sections 83 (1) and 111 (6), Chota Nagpur Tenancy Act, and settlement recess-work in the attested area. The whole programme was completed, except a small balance of office work which has since been finished.

71. *Cadastral Survey and Khanapuri.*—This work was supervised by 12 cadastral officers. The detailed survey was checked by 1·91 linear miles per square mile in addition to a check of 10 per cent. of quadrilateral lines. The size of the average field was found to be ·69 of an acre as contrasted with 1·3 in the previous year. Khanapuri disputes averaged 12 per square mile as against a previous average of 6. The cost rate on account of these causes, which show the greater intensity of cultivation in the year's area rose to Rs. 126 per square mile, as against Rs. 112 in Ranchi.

72. *Attestation.*—Nine officers were employed on attestation The number of raiyats recorded as having khuntkatti rights was 1·3 per cent. of the total number, while the proportions of settled and occupancy raiyats were 79·3 per cent. and 6·81 per cent., respectively. The percentage of non-occupancy raiyats was only ·3, a remarkable result due to the recent Tenancy Act legislation. The total area recorded as landlords' privileged lands was only ·62 per cent. of the whole. The average rates of rent per acre varied from thana to thana, but in no case exceeded Re 1. The lowness of the general average is due to the inclusion of large areas of inferior upland.

73. *Cess revaluation.*—The new Chapter II A of the Bengal Cess Act was applied for the first time in this settlement, and cess revaluation was done simultaneously with attestation. The Settlement Officer is entitled to much credit for the successful working of the combined procedure.

74. *Draft publication.*—The innovation of publication in the attestation camps, which has now been sanctioned by the Tenancy Rules, was continued this year and proved a great success and economy.

75. *Rent receipts.*—It is gratifying to learn that the great majority of the landlords grant regular rent receipts. The contrast with the South Bihar districts is striking, and has been drawn to the attention of the Board more than once before.

76. *Case-work* —Objections under section 83(1) and 111(6) and applications for produce-rent commutation were not very numerous. All were duly disposed of except a few commutation cases.

77. *Classification of lands.*—The system of classification of rice-land was modified as a result of experience in the first year's area, which showed that an unduly small proportion of the whole had been recorded in the third or lowest class. In the current year about 55 per cent. of the total rice area has been placed in this class, a result which agrees more closely with the facts than does the first year's classification.

78. *Agrarian conditions.*—The Settlement Officer has submitted an interesting note on the agrarian conditions of Hazaribagh, which shows how deceptive mere surface appearances may be and how inarticulate an oppressed tenantry may become through sheer force of habit and the utter absence of

hope. He has painted vividly the abuses of the thikadari system, which everywhere has the same evil results, and has drawn attention to a practice of serf-cultivation which obtains in Giridih. We found parallels to both usages in South Monghyr. I quote the Settlement Officer's remarks *in extenso*.

"This was the first year of attestation in Hasaribagh. The impression left upon the khanapuri officers was that settlement operations were not urgently required in the district, but it was desirable that the record of rights should be prepared, while the relations between raiyats and raiyats and between raiyats and landlords were comparatively peaceful and before there should be any epidemic of litigation. This impression was entirely dissolved during attestation; it became apparent that the raiyats as a body were under the heel of the landlords, and the absence of litigation was due to the ignorance of the tenants and their despair of successful resistance to the landlords in the courts. It is a common practice with some landlords to bring no rent suits, but to evict any tenant whose rent is in arrears. More than one case was discovered in which the cash rents of an entire village were exchanged by the landlord for a half produce-rent. Illegal enhancements of rent were found in almost every village, and these enhancements had often been repeated at intervals of five years; while the incidence of legitimate prædial conditions was generally light, the claim for illegal abwabs as contribution before the happening of any domestic occurrence were in several estates very exorbitant, especially where these claims were put forward not only for the tenure-holder, but for all the younger branches of his family.

"The most exacting landlords were generally found to be the thikadars under the Padma Raj. Many villages are given out on short temporary leases; on the expiry of each lease the rent of the thika is raised. The thikadars have no permanent interest in the village; their only object is to recoup their outlay and make as much additional profit as they can during the five or six years of their incumbency. Accordingly each successive thikadar must raise the rates of rent; and the system imposes a cumulative burden upon the tenants. The system is at its worst when the thikadar introduces a dar-thikadar for the exploitation of the village and the profits of two professional middlemen have to be extracted from the tenants. Again as the profits of a thika are from two sources, (*a*) the rent collection, and (*b*) the cultivation of the manjhihas (landlord's privileged land), there is a strong combination of the landlord's agent with the thikadars to extend the manjhihas by seizure of the best rice-lands in the village. The ousted raiyat regards resistance to this combination as hopeless, and in fact his chances of success in a suit for recovery would be very small. It is hoped that the settlement operations may put a check to the further extension of this system of tenures; many of the thikadars are finding that when the legal rent of the raiyats is recorded in place of the rent which they have been exacting, their profit on the thika is exchanged for a considerable loss and are anxious to escape from their contracts: the raiyats are not likely in the future to submit to enhancements which they know to be illegal; there will be no possibility of extending the village manjhihas, and consequently the profession of thikadar is likely to be less attractive than at present.

"One officer working on khanapuri this year near Giridih has reported the existence of a class of serf-cultivators near the Manbhum border. The serf is known as a Kamia: he holds lands called kamianti or palhet. A raiyat whose ordinary credit is exhausted will borrow money from a landlord or well-to-do raiyat and engage himself generally by a written contract to work continuously for his creditor by way of interest upon the loan. The so-called loan really represents the price for which the man sells himself to perpetual service, because it is obvious that a man in his position can never repay the money. The Kamia agrees not to work for anyone except his creditor or master: his wife and children are also the creditor's servants. The purchase-money is generally from Rs 20 to 40, a strong man or a married man getting more than a weak man or a bachelor. It is said that the position becomes hereditary, the son continuing to carry the father's debt. The Kamia gets from 5 to 10 cottahs of land for his own cultivation and some payment in kind proportionate to the amount of work done by him."

79. *Padma Raj.*—In the area appertaining to this estate, important questions regarding the resumability and scope of tenures and service grants arose. Some of these are now pending on appeal before the High Court.

80. *The Headman System.*—Village headmen were found in about 60 villages in the wilder part of the area. The Settlement Officer has the following note on the system:—

"It is clear that this kind of tenancy was formerly prevalent in a considerable portion of the south part of the district. It is a system which cannot stand, unless supported by law, against outside aggression: the headman was always described, and described himself, as a thikadar, and the courts have treated him as a temporary lessee of the village whose lease was terminable at will by the superior landlord. It followed that as soon as a village was sufficiently developed, the landlord took it over as a khas village, or leased it to a professional thikadar. In some cases the entire body of Santhal raiyats deserted their village in resentment at the introduction of a rent collector from outside the village and the break up of their tribal system. Such villages as have retained the system will now have the protection afforded by Chapter XV of the Chota Nagpur Tenancy Act."

CHAPTER IV.

(*See* Appendices I to X.)

REVISION SETTLEMENTS AND MAINTENANCE OF LAND RECORDS.

ORISSA REVISION SETTLEMENT.

Area, 5,186·18 square miles; villages 10,765.

81. *Staff.*—Mr. James Taylor, Deputy Collector, was in charge of the operations till the 4th of April, when he was succeeded by Mr. J. F. W. James, I.C.S., from Shahabad. Thirty-nine Assistant Settlement Officers were employed in the operations for varying periods.

82. *General progress.*—The table below shows the actual work done during the year in lakhs of plots and compares the general progress of the work with my forecast of 1908:—

NATURE OF WORK	Work done during the year in lakhs of plots.	Total work completed to date.	Programme according to estimate of 1908.
Khanapuri	...	90·3	87·5
Attestation	29·3	90 3	87 5
Janch	24·87	76	81·5
Fair copying ...	24·87	66·3	79·5
Comparison	25	63	78·5
Final publication ...	27	57·3	73
Case work	20·5	32	61

On the whole the work is not far behind the forecast of 1908. There has been an addition of 2·8 lakhs of plots to the programme. All field work has been completed. The arrear in office work is not great. It was inevitable because of the prolonged field season and the dearth of good muharrirs. Final publication fell behind on account of a rescrutiny of the *sarbasadharan* (communal lands) *khatians* conducted under the orders of Mr. Reid on a representation of Mr. J. N. Bose, zamindar of Cuttack. This delayed both final publication and case-work. It is expected that all arrears of office work and final publication will be made up during the present cold weather, but the volume of case-work will be much heavier than originally anticipated, and the operations will probably close six months later than at one time hoped. The net expenditure will not, however, much exceed the forecast of 1908, as the extra case-work will pay for itself from court-fee receipts.

83. *Attestation.*—Twenty-five officers were engaged in attestation during the season. The average monthly outturn fell a little below that of the previous year owing to an increase in internal disputes, which were 3·70 per cent. of the total number of plots against 3·45 in the preceding year.

84. *Draft publication.*—Draft publication was usually carried out in the attestation camps. The new procedure provided for in rule 62 (*b*) of the modified Tenancy Act rules for Orissa issued with Notification No. 2800 L.R., dated the 21st November, 1910, worked well, and was an improvement on the old system by which the draft publication kanungo used to take the records to the village for local publication.

85. *Section 103A objection.*—The number of objections under section 103 A exceeded 40,000 and represented a percentage of 1·46 per cent. on the plots attested. They were disposed of by Assistant Settlement Officers at an average monthly rate of 733. The Settlement Officer has seen a number of these cases on inspection and revision, and is satisfied with the manner in which they have generally been disposed of.

86. *Office.*—The work of checking, fair copying, finally publishing and distributing the records has been thoroughly reorganized by the Settlement Officer. It was in this department that most of the previous arrears of programme had accumulated. The new arrangements promise to bring the work to a speedy close. Until July 1911 final publication was done in the villages by kanungoes who at the same time distributed raiyats' copies of the *khatians*, while the zamindars were required to come to the head office for their copies. Frequent complaints were received that the kanungoes extorted money from the raiyats for their copies, and the zamindars on the other hand could with difficulty be persuaded to come to head quarters and take their copies. This practice resulted in the accumulation of a large number of unclaimed copies in the Cuttack and Balasore offices. Steps have been taken to distribute these copies and the system of final publication and distribution at convenient central camps has been substituted for local publication by kanungoes in accordance with amended rule 79 of the Tenancy Act Rules. The new method of final publication has been a complete success both as regards economy and expedition of work.

87. *Case-work.*—Five officers were employed on case-work under section 105 for varying periods and disposed of 1,993 applications. These were mainly filed by tenants for rent settlement on new reclamation, as in the preceding year, and the cases were mostly compromised. In the area last attested, that is, in the Puri district, the term for which rents were settled in the revenue settlement is approaching expiry, and the Settlement Officer expects that a number of applications will be filed under section 105 for enhancement of the old rents on the ground of rise in prices. It will be interesting to notice to what extent the landlords of Puri make use of this opportunity. Case-work disposals also included 1,785 section 106 cases, 5 cases under section 108, 4,026 cases under section 108 A, and 1,072 commutation cases under section 40. The results of appeals to the special Judge was on the whole satisfactory, orders being reversed in 25 per cent. of the cases only.

88. *Cost of the Settlement.*—The unexpected volume of the case-work which could not be foreseen in 1908 has thrown a large additional expenditure on the revision settlement, but this additional cost will be recouped from court-fee receipts. The Settlement Officer is hopeful that the net expenditure will not appreciably exceed the 11⅔ lakhs of rupees, which was estimated in the 1908 forecast.

Experimental maintenance of records in Orissa.

89. *Progress.*—The experiment of annual maintenance of records which had been conducted for two years in a portion of Balasore was extended in the field season of 1910-11 to the whole district. Three Assistant Superintendents, 10 Inspectors and 114 recorders were employed. Khanapuri was started in the beginning of November and completed by the end of June, and the average outturn of the recorders, when the work was in full swing, was 2,771 plots each per month. The three Assistant Superintendents began the work of attestation as soon as records became available. They had completed nearly 12 lakhs of plots or one-half of the entire programme, when I stopped the work in July. The average attestation outturn was 73,808 plots per officer per month in areas khampuried and attested in the previous year, and 39,300 plots in areas khanapuried but not attested in the previous year. During my rains tour in July I consulted the Hon'ble Mr. Slacke at Cuttack regarding the future of the experiment. In view of the declaration of the Secretary of State that no time should be lost in arranging to keep the revised records of Orissa up-to-date and of the provisional acceptance of triennial maintenance by the Government of India, it was decided to convert the experimental work of Balasore from an annual to a triennial basis and to introduce the triennial scheme into such portions of Cuttack as should be ready for experiment next field season. The rest of the year was spent in preparing for this new programme. In Balasore the charges of the three Assistant Superintendents were kept intact, but the recorders' circles had to be rearranged on the lines proposed in my note of April 1910 attached to the Government of

Bengal's letter No. 1742 T.—R., dated the 29th September 1910. They were reduced in number from 114 to 65, and were made to coincide as far as practicable with chaukidari unions. With a few exceptions, resident recorders nominated or approved by the panchayats have been appointed.

The district of Cuttack has been divided into 5 charges and 120 circles, but the revision records are not complete for the whole district, and the experiment will be tried this cold weather in three charges only. The recorders have been selected from the nominations of the panchayats, and there has been no difficulty in obtaining competent men for Cuttack.

Regarding the future of the experiment, the Settlement Officer has sounded the following note of warning:—

"There are many points for consideration which should warn those who wish to draw practical conclusions as to rates of progress from the experiment to be cautious. No objections after attestation have been heard, as is provided for in section 150 (1) of the draft Bill, and zamindars' copies have not been corrected. Again, little has been done towards making a complete record of proprietary rights. How this should be done is a matter for very special consideration. Meanwhile, in legislating on the subject of maintenance, Government should I think keep specially in view two principles—first, that final framing should accompany attestation so that parties shall not be harassed by having to attend the maintenance officer more than once, and, secondly, that we should place ourselves under no obligation to determine disputes free of cost to the party raising them."

This was a feature of the experimental work.

H. McPherson.

The whole question of maintenance is now under reconsideration in connection with the Orissa Tenancy Bill and the proposals of the Government of India contained in their letter No. 326—432—2, dated the 9th March 1911. A separate report on the subject has recently been submitted to the Board, and I, therefore, refrain from expressing my opinion here.

90. *Maintenance of land records in Sambalpur.*—Rules for the guidance of Revenue Inspectors and patwaris revised on the lines of the Central Provinces rules were introduced in Sambalpur during the year. All circulars subsequently issued in the Central Provinces are considered, in consultation with the Deputy Commissioner and the Commissioner, and, if applicable, are introduced in Sambalpur with the permission of the Board.

The Land Records staff has undergone no material change during the year, but proposals for improving their pay and prospects were submitted to the Board in my No. 94 T., dated 12th June 1911, and are now under the consideration of the Board and Government.

The work of the Land Records staff was satisfactorily performed, although somewhat hampered by the additional duties imposed on the staff in connection with the census. The number of resident patwaris increased during the year.

The check work of the Revenue Inspectors was somewhat below the prescribed standard on account of their census duties. The inaccuracies discovered in the check of the *jamabandi* entries by kanungoes was 1·63 per cent., which shows an improvement over last year. The inspection by superior agency was adequate. Instructions were given as usual to patwaris and to patwari candidates in the survey classes opened at Revenue Inspector's head-quarters during the rains. Subjects for the examination of these men were prescribed, with my approval, during the latter part of the year. The village papers were punctually filed in the tahsil offices before the close of the year. The office of the kanungo of the Sambalpur tahsil was inspected by the Superintendent of Land Records and the Deputy Commissioner.

The Superintendent of Land Records has recorded the following remarks on the system of *bhet begar*, which still prevails in Jaintpur Sasan:—

"In the course of my tour in the district I noticed that there are no *sir* lands in the village of Jaintpur Sasan, but the manjhdars and pattidars of the village realize *bhet begar* from the raiyats in the shape of money at the rate of 6 annas from tenants having one plough and double the amount from those having *more* than one in pattis Nos. 2, 3, 7, 9 and 11. The raiyats of these above pattis further state that the pattidars do not accept the rents if the money for *bhet begar* is not paid for. I think this is against the provisions of the *wasib-ul-urz* of this settlement."

The landlords of the village have been warned and their right and duties have been explained to the raiyats.

91. *North Bihar Mutation offices.*—There was a further decline in the transactions and receipts of the mutation offices at Bettiah, Hajipur and Mahnar, and the net loss on the working of the year was Rs. 1,663. The suggestion made last year that these offices be abolished may be held in abeyance till it has been decided whether the North Bihar revision settlement will be taken up at once or postponed for a few years.

92. *Record of mutations in Government and Wards' Estates.*—The results obtained in the record of mutations and the inspection of rent-rolls in Government and Wards' Estates for which a record-of-rights has been prepared have been embodied in Appendices VII to X. The standard prescribed as normal by the Board was exceeded in seven districts and approached in one district. In the remaining districts the percentage fell short. In Khurda and Kodhar Government estates in Puri the percentage was lowest. In the former it is due to the recent completion of the *milan khasra* operations and in the latter to the recent revision settlement. The total percentage in Government estates fell below the standard mainly on account of the exceedingly low figure for Khurda. If the Khurda figures be excluded in striking the average, the percentage is more than 6, and this is what might reasonably be expected.

Of the Wards' estates included in the return the prescribed standard was exceeded in five estates and reached in four estates. In the Chota Nagpur Division the percentage was generally below the standard, and the Commissioner has asked for an explanation of the deficit as required by the Board's Circular Order No. 11 of April 1903. In Pachetgarh (Midnapore) the percentage was only ·45 and is said to be due to the recent completion of the survey and settlement proceedings. Revised mutation rules on the Contai model will be introduced during the current year. The percentage is only ·6 in the Bettiah estate, and no adequate explanation has been given. The percentage is also noticeably low in Chapraon of Monghyr, in Sonbarsa and Barari of Bhagalpur, and in Rohini and Pakaur of the Santhal Parganas. Taking the Wards' estate as a whole, the percentage was 2·8 against 2·4 for the preceding year, showing a little improvement.

93. *Inspection of rent-rolls.*—Appendix X shows the result of the inspection of rent-rolls by superior and inferior agencies. I am doubtful what value, if any, can be attached to some of the entries in the returns. It seems incredible that 100 per cent. of the rent-rolls should be inspected in some cases without a single case of unreported mutation being detected. So far as the returns can be relied on, they show that the work of inspection was adequate.

CHAPTER V.

(*See* Appendix XI.)

Maintenance of Boundary Marks.

94. The details of the results of inspections of marks given in Appendix XI indicate the growing interest which District Officers are taking in their maintenance. In areas newly completed from survey and settlement, arrangements have been made to carry out the provisions of section 114 (2 of the Bengal Tenancy Act. Under Government order No. 1451 T.—R., dated 20th September 1911, a fund for the maintenance of boundary marks has been constituted by transfer of the advance recoveries made under the section and steps have been taken to provide for the expenditure that is likely to be incurred by District Officers during 1911-12 in completed areas.

95. *Burdwan Division.*—The marks on the Grand Trunk Road side lands, chars, camping ground and other Government estates in Burdwan received due attention. In the areas under settlement in Birbhum and Hooghly the Settlement Officers are carrying out the usual rules. Maps and stone registers for most of the settled areas in Midnapore were received by the

Collector during the year, and arrangements have been made for their distribution and the preparation of daffadari registers.

96. *Presidency Division.*—In the 24-Parganas a large number of the damaged and missing marks of Government estates still remain to be replaced. Similar marks in Murshidabad will be replaced from the grant for the financial year 1911-12.

97. *Patna Division.*—In the absence of stone maps and registers which were due from the Settlement Officer the Collector of Patna could not arrange for the general application of the rules, but the work will receive attention in the present season. In Shahabad boundary stones have been checked in the usual way by the Settlement Department, and an attempt will be made this season to distribute the marks among chaukidars and daffadars by the khanapuri and attestation officers. This procedure will not only relieve the Collectorate staff of the duty of distribution, but will obviate the necessity of a fresh verification at the time of distribution.

98. *Tirhut and Bhagalpur Divisions.*—Under Board's order No. 1513 A., dated 19th March 1907, the work of maintenance of marks has been confined mainly to the Government and Wards' estates of the North Bihar districts. The Collector of Bhagalpur took much interest in the work of verification and distribution in the southern half of the district, and will complete his arrangements this cold weather. The steps taken to maintain boundary marks in Darjeeling and the Sonthal Parganas were adequate.

99. *Orissa Division.*—The work of inspection and maintenance in Cuttack, Balasore and Puri was under the control of the Settlement Officer who met the cost of restoration from his budget. In Angul 20 new masonry pillars were constructed on the Angul-Athmalik boundary. In Sambalpur the traverse marks were all inspected and found to be generally in good condition. Six village mukaddams were fined and 7 were warned for neglect of duty in this matter.

100. *Chota Nagpur Division.*—In the areas under settlement in Hazaribagh and Manbhum the usual rules of check were followed by the Settlement Officer, who will shortly make over the maps and stone registers to the Deputy Commissioners. In Ranchi distribution of marks to chaukidars was undertaken during the year and is in progress. Adequate steps appear to have been taken in Singhbhum for the maintenance of marks both in the Kolhan and private estates. Arrangements are being made in consultation with the Political Agent to restore and maintain pillars on the common boundaries between the Kolhan and the adjoining Political States.

CHAPTER VI.

Charge and Tours of the Director and Notice of Officers.

101. *Charge.*—I was in charge of the Department throughout the year.

102. *Tour.*—My tours extended to 158 days and in their course I paid 6 visits to the Orissa settlement, 5 visits each to the Bihar and Chota Nagpur settlements, and 4 visits to the Shahabad settlement. I inspected the Hooghly and the Rampur Hât operations thrice, the Midnapore settlements twice and the Mokimpore settlement once. I also paid a visit to Sambalpur to inspect the maintenance of land records and a visit to Muzaffarpur to obtain information in connection with the proposed scheme for the revision of the North Bihar settlement. During one of my Orissa tours I visited Puri and drew up a scheme for the Khurda resettlement in consultation with the Collector. I also met the Commissioner of Chota Nagpur at Chaibassa, and discussed with him and the Deputy Commissioner proposals for the resettlement of the Kolhan Estate.

103. *Notice of officers.*—It gives me much pleasure to notice the meritorious services rendered by a large number of the officers employed on settlement work during the year. The high standard of efficiency that has become traditional in the Department was fully maintained. The field programme of Shahabad,

now an independent charge, was carried through most efficiently by Mr. Hubback. He was ably seconded by Messrs. James, Shettle, Rowland and Babu Nilmani Dey. Mr. Shettle held charge during the absence of Mr. Hubback in the recess season and ran the office to my entire satisfaction. Mr. Rowland had the misfortune to contract an illness which will deprive us of his services for some time. Babu Nilmani Dey has reverted to general duty after many years of faithful duty in the department. In Chota Nagpur Mr. Sifton has proved himself a worthy successor of Messrs. Lister and Reid, and has brought sound judgment to bear on the many difficult problems that have presented themselves. He has acknowledged the help which he received from his three covenanted assistants Messrs. Nelson, Bridge and Sweeney. In April we lost the valuable services of Mr. Taylor who, after three years' arduous work in the Orissa Revision Settlement, was appointed Deputy Commissioner of Angul. Mr. James succeeded him from Shahabad and has gratified me by his capacity for organization and his mastery of the financial details of the settlement. Babu Rampada Chatterji has brought the complicated khas mahal settlements of Midnapore to a close, and has written a comprehensive report on the work of the past seven years. Babu Sudarsan Das has been commended by the Board for his work in Parikud and his final report. Mr. P. M. Robertson has worked most devotedly in the Birbhum settlement, and Babus Mahendra Nath Gupta and Akshay Kumar Mukharji have done good work in their respective charges of Hooghly and Mokimpur

My Personal Assistant, Babu Charu Chandra Kumar, has been invaluable to me in the head-quarters office.

The following officers* have been selected for special mention from the reports of their settlement officers. I am hopeful that some of them will this year receive the reward of promotion which they have richly earned by many years of devoted labour in the department:—

Deputy Collectors.

Maulvi Syed Dilawar Ali.
Babu Bhuban Mohan Chatarji.
„ Akhauri Gopi Kishor Lal.
„ Surendra Nath Sen.
Lala Prem Nath Kapur.
Babu Karali Charan Ganguli.
Maulvi Shamsuddin Haidar.
Mr Nrisinha Ranjan Mukharji.
Babu Bijoy Bihari Mukharji.
Mr. A. P. Petter.
Babu Surendra Nath Sarkar.

Sub-Deputy Collectors.

Babu Hari Das Ray*.
Mr. H. McPherson.*
Babu Satkauri Pati Ray.
„ Basanta Kumar Ray.
„ Dhanmussi Panna.
„ Phanindra Nath Gupta.
„ Madhab Chandra Misra.
„ Radha Charan Das.
Babu Barendra Krishna Das Adhikari.
„ Jogendra Nath Banarji.
„ Shamshair Jang Bahadur.*
Pandit Lachmi Misra.*
Babu Surendra Nath Banarji, No. II.
Maulvi Anwar Karim.*
Babu Satamanyu Mukharji.
„ Chandra Kumar Mathur.

Munis.

Babu Surendra Nath Mukharji.
Babu Sachindra Kumar Sen.
Babu Tulsi Das Mukharji.

Professional Advisers.

Mr. N. Bedford.
Mr. J. H. Murphy.

Others.

Babu Jatindra Nath Mukharji
„ Daitari Misra.
Mr. H. W. Alderson.
„ J. E. Coutts.
Babu Phanindra Bhusan Mitra.
Maulvi Ekramuddin.
Babu Mahendra Nath Sarkar.
„ Pasupati Ghosh.
„ Ramesh Chandra Ghosh.
„ Satish Chandra Singh.
„ Karunamay Ray.
„ Satish Chandra Ghosh.

* NOTE.—Since the above lists were drawn up, the Sub-Deputy Collectors whose names have been marked with an asterisk, viz., Babu Hari Das Ray, Mr. H. McPherson, Babu Shamshair Jang Bahadur, Pandit Lachmi Misra and Maulvi Anwar Karim have been promoted to be Deputy Collectors. The list of promotions also includes Babu Bhubaneswar Sanyal who is now in charge of petty settlements in Midnapore, but was for many years an Assistant Settlement Officer of this Department.

104. *Relations with other departments.*—I desire to record with gratitude the cordial support and assistance which I have always received from the Director of Surveys, Colonel Crichton, C.I.E., during the four years that I have been associated with him in the control and supervision of survey and settlement operations in Bengal. I also take this opportunity of placing on record my indebtedness to the Commissioners and District Officers in whose charges settlement work has been proceeding and my appreciation of the co-operation, sympathy and hospitality that have been uniformly extended to me during the long period that I have been in charge of the Department of Land Records.

I have the honour to be,

SIR,

Your most obedient servant,

H. McPHERSON,

Director of Land Records, Bengal.

APPENDICES.

[*N.B.*—Figures in these Appendices which do not agree with those in last year's Report are revised figures.]

APPEN

General Progress of Survey and Settlement

Division and District.	Name of estate or tract under settlement.	Date of inception of operation.	Estimated area, in square miles, under settlement.	Total number of villages.	Area cadastrally surveyed, in square miles—			Area in which records have been prepared for attestation—		
					Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11
Burdwan.										I.—Settlement on (a) *Government*
Midnapore ...	Balarampur and other petty Government estates.	8th Oct. 1903	91·26	141	91·26	...	91·26	91·26	...	91·26
Hooghly ...	11 Government estates.	Dec. 1906 to Nov. 1910.	2·44	43	1·66	·78	2·44	1·66	·78	2·44
Orissa.										
Balasore ...	Bichitrapur ...	30th Nov. 1905	5·26	6	5·26	...	5·26	5·26	...	5·26
Burdwan.										(b) *Temporarily*
Midnapore ...	Kalyanpur, Jalamutha, Halamutha, Bhetia and other estates.	8th Oct. 1903	559·96	1,504	559·96	...	559·96	559·96	...	559·96
Hooghly ...	21 Temporarily-settled estates.	December 1909 to Nov. 1910.	2·08	16	·25	1·83	2·08	·25	1·83	2·08
Burdwan.										II.—Other (a) *Ori*
Birbhum ...	Rampurhat (Bonchal tract).	22nd Jan. 1910	135·69	106	131·36	3·37	135·13	131·76	3·36	135·13
Midnapore ...	Dipakhereband, Jamirpal and 18 other petty estates.	8th Oct. 1903	465·21	1,469	465·21	...	465·21	465·21	...	465·21
	Nayabasan and Rohini.	7th July 1905								
	Jhargram and Chiara.	24th Jan. 1908								
Hooghly ...	45 Zamindari estates.	January 1906 to Nov. 1910.	45·07	161	37·21	7·16	45·07	36·20	8·87	45·07
Presidency.										
Jessore ...	Mokimpur estate	12th Feb. 1910	26·01	39	26·01	...	26·01	26·01	...	26·01
Bhagalpur.										
Bhagalpur ...	South Bhagalpur	October 1905	1,632	2,365	1,632	...	1,632	1,632	...	1,632
Monghyr ...	South Monghyr ...	October 1906	2,365	2,017	2,365	...	2,365	2,365	...	2,365
Patna.										
Patna ...	Patna ...	1st Nov. 1906	1,938	2,509	1,938	...	1,938	1,938	...	1,938
Shahabad ...	Shahabad ...	Nov. 1905 ...	4,191	6,089	1,637	1,559	3,196	1,637	1,559	3,196
Orissa.										
Cuttack ...	Killa Bishnupur	14th Feb. 1909	17·44	44	17·44	...	17·44	17·44	...	17·44
Ditto ...	Arilio and Ratagarh.	10th Jan. 1910	2·06	2	2·06	...	2·06	2·06	...	2·06
Puri ...	Parikud ...	9th Dec. 1906	140	128	140	...	140	140	...	140
Chota Nagpur.										
Ranchi ...	Ranchi ...	1st Mar. 1902	7,104	3,924	7,104	...	7,104	7,104	...	7,104
Singhbhum ...	Dhalbhum ...	1st Sept. 1906	1,179	1,686	1,179	..	1,179	1,179	...	1,179
Ditto ...	Monoharpur tenure.	1st Nov. 1906	14	6	14	...	14	14	...	14
Manbhum ...	Barabhabhum and Patkum.	1st Oct. 1906	934	899	934	...	934	934	...	934
Hazaribagh ...	Hazaribagh ...	1st Oct. 1909	6,911	Not known	1,606	1,606	3,212	1,606	1,606	3,212
Orissa.										(b) *Revi*
Cuttack ...	Cuttack	30th Jan. 1908	2,389·43	5,054	2,389·43	...	2,389·43	2,389·43	...	2,389·43
Balasore ...	Balasore ...	22nd Sept. 1908	1,707·21	3,505	1,707·21	...	1,707·21	1,707·21	...	1,707·21
Puri ...	Puri	11th Oct. 1909 1st June 1910 11th Sept. 1910	1,089·54	2,196	1,089·54	...	1,089·54	1,089·54	...	1,089·54
										(c) *Experimental*
Balasore ...	Sadar Sub-division, Bhadrak Subdivision.	1st Nov. 1908 1st Nov. 1909	1,713	3,605	1,713	...	1,713	1,506·20	207	1,713
	Total ...		34,531·06	37,836	30,750·96	3,379·24	30,137·60	26,566·24	3,387·16	30,137·60

* Cost included in the
† Cost included in the
‡ Cost included in the
** Including Rs. 431 incurred on account of

DIX I.

during the year ending 30th September 1911.

SQUARE MILES.													
In which attestation has been completed—			In which draft publication has been completed.			In which final publication has been completed—			Cost of operations.			Total cost-staff in the operations shown as completed in this return.	
Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Up to the end of the preceding year.	During the year.	Total.	Estimated.	Actual.
12	13	14	15	16	17	18	19	20	21	22	23	24	25
									Rs.	Rs.	Rs.	Rs.	Rs.
LAND REVENUE.													
Estates.													
91·25	...	91·25	91·25	...	91·25	79·49	10·51	91·00	4,246	19 309	23,767	...	...
1·00	1·44	2·44	...	2·44	2·44	...	1·75	1·75	3,921	2,749	6,670	...	...
...	5·56	5·56	...	5·56	5·56	...	...	...	...	..‡	...‡	...	...
settled Estates.													
507·96	...	509·96	509·96	...	509 96	507·40	2·56	509·96	6,04,789	..*	6,04,789	...	...
...	2·03	2·03	...	2·03	2·03	...	2·03	2·03	...†	..†	..†	...	...
SETTLEMENTS.													
ginal.													
...	153·14	153·14	...	153·14	153·14	...	...	...	17,338	28,880	46,194	...	...
468·21	...	468·21	468·21	...	468·21	468·21	...	468·21	1,68,931	...*	1,68,931	...	...
34·25	6·75	41·00	26·25	13·25	39 53	9·16	11·09	20·16	52,280	20,334	72,614	...	...
...	26·01	26·01	...	26·01	26·01	...	5·25	5·25	5,674	5,902	11,576	...	...
1,622	...	1,622	1,622	...	1,622	1,622	...	1,622	3,03,443	563	3,04,006	...	...
2,275	10	2,285	2,285	0	2,285	2,219	46	2,265	4,15,468	32,908	4,48,476	...	...
1,938	...	1,938	1,938	...	1,938	795	1,143	1,938	3,29,488	1,49,514	4,79,002	...	...
330	1,408	1,837	329	1,408	1,837	...	493	493	3,60,134	4,17,172	7,77,306	...	...
17·44	...	17·44	17·44	...	17·44	...	...	...	6,490	694	7,184	...	...
2·06	...	2·06	2·06	...	2·06	...	2·06	2·06	545	372	917	...	
140	...	140	140	...	140	140	...	140	54,570	2,658	57,228	...	...
7,104	...	7,104	7,104	...	7,104	5,108	1,993	7,104	15,71,469	23,206	15,99,977	...	...
1,179	...	1,179	1,179	...	1,179	1,179	...	1,179	2,72,500	10,795	2,84,304	...	...
...	14	14	...	14	14	...	14	14	728	1,004	1,732	...	...
436	298	934	636	298	934	...	626	626	1,90,106	42,655	2,32,761	...	
24	2,461	1,605	25	1,461	1,505	25	...	25	1,90,194	2,29,717	5,27,911	...	...
sional.													
1,288·62	496·61	2,339·43	1,839·18	500·25	2,339·43	614·71	1,344·97	1,757·68					
2,706·62	29	1,707·21	1,706·62	·59	1,707·21	1,619·55	91·38	1,603·25	9,34,921	3,13,547	12,38,778	...	...
...	1,089·54	1,089·54	...	1,089·54	1,089·54	...	...	...					
maintenance.													
896·83	751·08	1,647·91	860·23	787·68	1,647·91	...	...	...	72,346	...‡	72,346	...	...
29,382·75	6,815·25	36,697·96	29,459·21	8,238·57	36,697·78	14,572·46	5,093·25	19,679·71	55,57,860	14,05,069**	69,69 96**	...	...

figure 19,909 put against Government estates.
figures in corresponding columns against Government estates.
cost of Estimate revision operations.
enquiries into landlords' privileged lands in Porahat Estate in Singhbhum.

APPENDIX II.

Return of Survey and Khanapuri Inspection and of Boundary and Internal Disputes during the year ending 30th September 1911.

Name of area under Settlement.	CADASTRAL SURVEY.						KHANAPURI.					Number of boundary disputes decided.	Number of internal disputes decided.
	Area in square miles surveyed during the year.	PERSONAL PARTAL IN LINEAR MILES.			Independent partal in linear miles.	Total partal in linear miles.	Total number of plots inspected.	NUMBER OF PLOTS TESTED.					
		By Assistant Settlement Officers.	By Kanungos and Head Inspectors.	By Inspectors.				By Assistant Settlement Officers.	By Kanungos and Head Inspectors.	By Inspectors.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
						Original.							
Hooghly: Government Estates.	·78	·10	...	1·00	...	1·10	1,554	21	...	270	291	1	7
Hooghly: Temporarily-settled Estates.	1·53	·20	...	2·32	...	4·05	625	...	...	69	69	...	...
Birbhum: Rampur Hat (Sonthal tract).	2·57	...	10·28	2·00	...	17·68	5,835	51	1,479	844	1,779	9	1,162
Hooghly: Zamindari Estates.	7·15	2·28	...	12·60	...	26·13	14,710	140	...	1,986	2,626	8	765
Shahabad ...	1,575·65	297·86	558·79	2,359·25	1,572·15	5,363·05	1,917,092	11,108	36,627	116,240	164,585	217	29,977
Balasore: Bichitrapore Government Estate.	...	...	...	...	...	...	...	...	...	...	...	...	262
Ranchi ...	1,204	256	464	3,304	1,285	5,030	1,366,442	14,748	26,122	135,295	226,165	635	21,965
						Divisional.							
Cuttack	...	...	...	...	...	...	6,251	9,251	...	...	9,251	5	41,497
Balasore	...	...	...	...	...	...	...	...	...	...	...	...	115
Puri	...	...	...	...	...	...	...	...	...	...	...	...	28,481
						Experimental Maintenance.							
Balasore	...	...	...	...	...	...	2,986,126	2,484	...	118,939	121,283	...	2

* Including 16·85 square miles topographically surveyed on 16" for standard mapping in thanas Buxar, Dumraon and Piro.

APPENDIX III.

PART A.

Progress in settlement of rents under section 104, Act VIII of 1885, in areas that are under settlement of Land Revenue during the year ending 30th September 1911.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	Number of tenants for whom rents have been proposed—			Number of villages for which settlement rent-roll has been published in draft—			Objections under section 104 B.		
				To the end of the previous year.	During the year.	Total.	To the end of the previous year.	During the year.	Total.	Instituted—		
										To the end of the previous year.	During the year.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
Hooghly: Government estates.	·20	4	237	...	237	237	...	...	...	...	...	...
Hooghly: Temporarily-settled estates.	·05	1	47	47	...	47	...	...	...	...	...	...
Balasore: Bichitrapore Government estate.	5·06	6	1,022	...	1,022	1,022	...	6	6	...	...	...

Estate or tract under settlement.	Objections under section 104 B.			Number of villages and tenants of which during the year a settlement rent-roll has been confirmed—						Comparative rental of villages and tenants in columns 19 and 20.		
	Disposed of—			To the end of the previous year.		During the year.		Total.				
	To the end of previous year.	During the year.	Total.	Villages.	Tenants.	Villages.	Tenants.	Villages.	Tenants.	Former rental.	Settled rental.	Difference per cent. + or —
	14	15	16	17	18	19	20	21	22	23	24	25
Hooghly: Government estates.	...	...	...	...	...	...	...	...	...	...	...	...
Hooghly: Temporarily-settled estates.	...	...	...	...	...	...	...	...	...	...	...	...
Balasore: Bichitrapore Government estate.	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX III.

PART B.

Progress in settlement of rents in areas that are not under settlement of Land Revenue during the year ending 30th September 1911.

Estate or tract under settlement.	Total area in square miles.	Total number of villages.	Total number of tenants.	PROCEEDINGS UNDER SECTION 105(c), BENGAL TENANCY ACT.				(a) NUMBER OF SECTION 105 CASES WHICH HAVE BEEN INSTITUTED—			
				Number of tenants.	Rent according to landlord.	Rent locally payable.	Rent settled by compromise.	To the end of the previous year.		During the year.	
								Number.	Number of tenants.	Number.	Number of tenants.
1	2	3	4	5	6	7	8	9	10	11	12
					Rs.	Rs.	Rs.				
Hooghly: Zamindari estates.	45·07	138	25,460	453	3,199	3,199	3,681	2,157	2,153	1,976	1,976
Birbhum—Rampur Hat.	138·13	106	30,093	220	2,572	1,804	2,956	...	...	...	...
Midnapore—Jhargram and Chhota.	310	622	18,500	...	...	...	...	576	6,432	37	680
South Bhagalpur ...	1,632	2,558	150,6 5	...	...	...	...	1,861	20,772	... 13	... 223
South Monghyr ...	2,315	2,000	252,568	...	...	...	...	982	14,708	856	
ditto ...	20	17	2,346	2,254	15,182	9,738	10,007	...	...	29	2,391
Patna	1,388	2,009	623,628	...	...	...	16,086	46	1,449	137	2,207
Shahabad ...	1,486	2,440	314,07	1,316	17,078	...	...	...	...	483	2,575
Ranchi	2,127	1,974	158,870	...	...	...	...	562	12,999	625	9,705
Singhbhum: Dhalbhum estate.	1,1·9	1,826	77,823	...	...	...	...	1,573	22,060	... 3	... 17
Ditto Manoharpur	14	6	540	...	...	...	...	...	...	551	...
Manbhum—Barabhum.	636	936	59,540	...	...	...	...	440	440		
Puri—Parikud ...	140	128	13,923	...	...	...	...	5,339	9 222	3,499	3,499
Cuttack	1,757·85	3,896	...	...	...	...	...	2,027	2,072	2,111	2,115
Balasore ...	1,608·34	3,515	638,921	...	...	...	...	12,454	15,515	263	278

Estate or tract under settlement.	NUMBER OF SECTION 105 CASES WHICH HAVE BEEN INSTITUTED—		NUMBER OF CASES WHICH HAVE BEEN DISPOSED OF—						OF TENANTS IN COLUMN 12.		
	Total.		To the end of the previous year.		During the year.		Total.		Former rental.	New rental.	Difference, per cent + or —.
	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.	Number.	Number of tenants.			
	13	14	15	16	17	18	19	20	21	22	23
									Rs.	Rs.	
Hooghly: Zamindari estates.	4,033	4,033	706	706	940	940	1,646	1,646	5,835	6,767	+22·48
Birbhum: Rampur Hat.	...	...	...	...	...	...	...	...	..	...	...
Midnapore—Jhargram and Chhota.	915	6,162	394	3,292	519	3,510	913	6,102	...*	...*	...*
South Bhagalpur ...	1,561	20,773	1,546	19,611	15	874	1,561	20,485	11,108	13,178	+9·27
South Monghyr ...	1,004	15,801	914	12,999	99	2,311	1,013	15,301	31,983	34,321	+10·21
ditto ...	656	...	...	...	656	...	656	...	9,738	10,007	+2·762
Patna	344	4,540	... 99	606	134	3,573	813	4,185	71,902	79,589	+11·27
Shahabad ...	127	2,207	...	...	...	...	...	...	...	...	...
Ranchi	1,244	21,569	... 88	826	589	10,814	555	11,412	6 6,831	61,091	+5·25
Sin. bhum: Dhalbhum estate.	3,497	34,765	11	235	2,856	34,543	3,497	34,543	76,275**	122,543	+38
Do. o Manoharpur	3	17	...	...	...	...	...	...	...	...	...
Manbhum—Barabhum.	991	...	...	...	...	...	...	...	...	...	...
Puri—Parikud ...	11,839	11,731	8,338	8,221	3,300†	3,300	11,699	11,601	5,818	7,731	+32·63
		II.—Revisional.									
Cuttack ...	4,126	4,126	734	734	1,414	1,461	2,148	2,264	2,077	4,669	+225
Balasore ...	13,916	13,795	12,836	13,169	970	693	13,806	13,762	729	2,027	+178·464

(a) Includes fair rent settlement under Sections 55 and 56 of the Chota Nagpur Tenancy Act.

* Figure not available.

† 131 Cases withdrawn not included in this figure.

‡ Estate to an area dealt with under Section 113 Bengal Tenancy Act.

** Exclusive of 6,463 mds. paddy and 1,6282 mds. rice.

§ The fair rent settlement work was mostly concerned with excess areas.

APPENDIX III.

PART C.

Progress in disposal of Case-work other than settlement of fair rents during the year ending 30th September 1911.

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
			I—LAND REVENUE SETTLEMENTS.				
Midnapore.			(a) *Government Estates and Temporarily-settled Estates.*				
Section 40 ...	4,218	...	4,218	1,407	...	1,407	2,811*
Do. 103A ...	1,528	1,274	2,802	1,280	1,522	2,802	...
Hooghly.							
Boundary disputes ...	...	1	1	...	1	1	...
Section 103A ...	...	7	7	...	3	3	4
			II—OTHER SETTLEMENTS.				
Birbhum.			(a) *Original.*				
Rampur Hât (Sonthal tract).							
Boundary disputes ...	70	8	78	70	8	78	...
Section 103A ...	...	4,946	4,946	...	4,946	4,946	...
Midnapore.							
Section 106 ...	1,705	25	1,730	1,628	102	1,730	...
Hooghly.							
Boundary disputes ...	6	1	7	3	3	6	1
Section 40 ...	...	3	3	...	...	...	3
Do. 103A ...	4,310	2,864	7,174	3,695	3,200	6,895	279
Do. 106 ...	955	880	1,835	568	934	1,502	333
Do. 108 ...	...	50	50	...	43	43	7
Do. 103A ...	...	19	19	...	19	19	...
South Bhagalpur.							
Section 40 ...	4,281	4	4,285	4,208	77	4,285	...
Do. 106 ...	681	...	681	679	2	681	...
South Monghyr.							
Section 40 ...	12,256	2,666	14,922	9,560	4,726	14,286†	636
Do. 103A ...	21,186	74	21,260	21,186	74	21,260	...
Do. 106 ...	555	39	594	446	148	594	...
Patna.							
Section 40 ...	4,729	2,203	6,932	2,763	3,080	5,843	1,089
Do. 106 ...	92	254	346	30	287	317	29
Shahabad.							
Section 40 ...	39	808	847	...	...	...	847
Do. 103A ...	17,127	75,961	93,088	13,956	79,132	93,088	...
Do. 106 ...	...	102	102	...	...	...	102
Jessore; Mokimpur.							
Boundary disputes ...	19	3	22	19	3	22	...
Section 103A ...	...	721	721	...	539	539	182
Cuttack.							
Killa Bishunpur ...	1	...	1	1	...	1	...

* Work suspended under Board's orders No. 300 A.—T., dated 23rd May 1910.
† Out of this 3,305 cases were transferred to Civil Court.

Name of estate or tract under settlement and nature of case.	Instituted to the end of the previous year.	Instituted during the year.	Total instituted.	Disposed of in previous years.	Disposed of during the year.	Total disposed of.	Balance pending.
1	2	3	4	5	6	7	8
Ranchi.							
Section 61, C. N. T. A.	455	147	602	441	159	600	2
Do. 87, ditto	372	236	608	68	333	401	207
Do. 94, ditto	2,070	176	2,246	1,242	1,003	2,245	1
Do. 111(8), ditto	37	14	51	16	32	48	3
Do. 130, ditto	...	7	7	...	...	...	7
Do. 252, ditto	...	15	15	...	...	...	15
Singhbhum : Dhalbhum estate.							
Section 61, C. N. T. A. Do. 40, B. T. A. ... Do. 87, C. N. T. A.	2,024	1,236	3,260	48	3,212	3,260	...
Do. 106, B. T. A.	118	...	119	82	37	119	...
Do. 111(8), C. N. T. A.	6	...	6	3	3	6	...
Section 120, ditto	11	...	11	11	...	11	...
Section 130, ditto	261	...	261	206	55	261	...
Monoharpur tenure.							
Section 83(1), C. N. T. A.	26	...	26	26	...	26	...
Do. 87, ditto	...	2	2	..	...	...	2
Porahat estate.							
Section 83(1), C. T. N. A.	...	10	10	...	10	10	...
Do. 87, ditto	...	2	2	...	...	...	2
Manbhum : Parganas Barabhum and Patkum.							
Boundary disputes ...	615	...	615	614	1	615	...
Section 83 (1), C. N. T. A.	6,235	1,269	7,504	6,235	1,269	7,504	...
Section 87 ...	...	49	49	...	...	...	49
Do. 130 ...	...	24	24	...	2	2	22
Hazaribagh.							
Boundary disputes ...	630	605	1,235	630	605	1,235	...
Section 61, C. N. T. A.	...	175	175	...	163	163	12
Do. 83 (1), ditto	8	4,815	4,823	8	4,815	4,823	...
Do. 111 (6), ditto	...	157	157	...	157	157	...
Puri : Parikud.							
Section 40 ...	...	16	16	...	16	16	...
Do. 50 ...	...	3	3	...	...	...	3
Cuttack.			(b) *Revisional.*				
Boundary disputes ...	26	...	26	20	5	25	1
Section 40 ...	1,059	361	1,420	...	...	...	1,420
Do. 103A ...	59,373	14,534	73,907	57,423	16,484	73,907	...
Do. 106 ...	1,953	379	2,712	379	1,695	2,074	638
Do. 108 ...	2	3	5	1	4	5	...
Do. 108A ...	520	1,949	2,469	252	2,051	2,303	166
Balasore.							
Boundary disputes ...	7	...	7	7	...	7	...
Section 40 ...	1,545	69	1,614	479	1,072	1,551	40
Do. 103A ...	24,685	154	24,839	24,677	162	24,839	...
Do. 106 ...	1,439	77	1,516	1,416	90	1,506	10
Do. 108 ...	13	7	20	13	7	20	...
Do. 108A ...	1,675	1,544	3,219	1,212	1,975	3,187	32
Puri.							
Section 40 ...	...	100	100	...	...	...	100
Do 103A ...	...	26,019	26,019	...	26,019	26,019	...

APPENDIX III.

PART D.

Progress in settlement of Land Revenue during the year ending 30th September 1911.

Name of estate or tract under settlement.	Total area.	Total existing assess.	Total new assess.	New Land Revenue settled during the year.				Total cost and cost rate.		
				Area.	Existing Land Revenue.	New Land Revenue.	Percentage of difference, + or −.	Total costs incurred on area in column 5.	Cost rate per square mile according to sanctioned estimate.	Actual cost rate per square mile, column 9÷5.
1	2	3	4	5	6	7	8	9	10	11
	Sq. M.	Rs.	Rs.	Sq. m.	Rs.	Rs.		Rs.	Rs.	Rs.
Hooghly : 2 Government Estates.	1·64	5,905	5,391	1·64	4,985	5,385	+8·0	324	...	195
Hooghly : 16 Temporarily-settled Estates.	1·61	16,219	4,131	1·61	18,098	3,942	(a) −61·7			
Balasore : Bichhitrapore Government Estate.	3·14	4,474	5,025	3·65	4,674	(b) 5,825	...	2,107	...	...

(a) Decrease due mainly to dilution.
(b) Proposed, but not yet confirmed.

PART E.

Results of Appeals during the year ending 30th September 1911.

Name of estate or tract under settlement.	Nature of case.	Pending from previous year.	Instituted during the year.	Disposed of during the year.	Balance pending.	Results of appeals (column 5).			
						Decisions—			Cases returned for retrial.
						Upheld.	Modified.	Reversed.	
1	2	3	4	5	6	7	8	9	10
				I.—Land Revenue Settlements.					
				(a) *Government and Temporarily-settled Estates.*					
Midnapore.									
Jalamuths, Majamaths and other estates.	Section 104 G	2	...	2	...	2	...	...	...
	Do. 46	135	...	...	135*	...	...	...	...
				II.—Other Settlements.					
				(a) *Original.*					
Birbhum.									
Rampur Hat (Sonthal tract).	Boundary disputes ...	1	5	6	...	3	2	1	...
Hooghly : Zamindari estates.	Section 105	94	112	93	113	61	...	17	5
	Do. 106	30	...	3	9	2	...	...	...
	Do. 106C	...	...	...	...	...	...	...	...
South Bhagalpur ...	Section 105 (B. T. A.)	...	39	39	...	...	39	...	...
	Do. 106 (B. C. A.)	...	4	3	1	1	1	1	...
	Do. 46 (B. T. A.)	1	26	27	...	5	...	22	...
	Do. 106 and 106A	...	1	1	...	1	...	...	...
South Monghyr	Section 40 (B. T. A.)	210	206	114	302	69	36	...	75
		2,626	2,926	2,226	2,301				
	Do. 104C (B. T. A.)	...	659	659	...	659	...	...	...
	Do. 106G (B. T. A.)	...	1	1	...	1	...	...	...
	Do. 104 (B. T. A.)	9	38	45	12	27	9	3	3
	Do. 106 (B. T. A.)	2	27	7	23	3	4	...	...
Patna	Section 40 (B. T. A.)	69	125	2	184	5	...	...	...
	Do. 104 (B. T. A.)	...	55	2	53	2	...	...	...
	Do. 106 (B. T. A.)	...	12	3	9	2	...	1	...
Shahabad	Boundary disputes ...	3	61	64	...	52	12	...	...
Puri.									
Parikud	Section 105	...	1	...	1	...	...	...	...
	Do. 106	...	31	...	31	...	...	...	...
Chota Nagpur.									
Ranchi	Section 61, C. N. T. A.	...	22	14	8	3	1	26	...
	Do. 88, ditto	...	13	11	2	5	1	5	...
	Do. 87, ditto	...	15	2	13	...	...	...	...
	Do. 111(3), ditto	...	1	1	...	1	...	...	...
Singhbhum : Dhalbhum Estate.	Section 61 C. N. T. A.	...	1	1	...	...	1	...	...
	Do. 88, ditto	...	12	10	2	9	...	...	1
	Do. 87, ditto	...	2	...	2	...	...	...	...
	Do. 150, ditto	...	3	3	...	3	...	...	...
	Do. 105, B. T. A.	...	15	...	15	...	...	...	...
Manbhum : Barabhum and Pathum.	Boundary disputes ...	10	...	10	...	10	...	...	...
	Section 61, C. N. T. A.	1	...	1	...	1	...	...	...
Hazaribagh	Boundary disputes ...	26	89	115	10	70	14	21	10
	Section 61, C. N. T. A.	...	9	9	...	...	...	9	...
				(b) *Revisional.*					
Cuttack	Sections 105 and 106 ...	22	67	92	17	53	5	33	...
Balasore									

* Kept in abeyance under Board's order No. 300 A.-T., dated 23rd May 1910.

APPENDIX IV.

Statement showing the nature and number of holdings recorded in each settlement during the year ending 30th September 1911.

Name of estate or tract under settlement.	Number of khatian recorded in the name of—												
	Proprietors.		Tenure-holders' ordinarily occupancy.	Raiyats at fixed rates or fixed rents.	Settled raiyats.	Occupancy raiyats.	Non-occupancy raiyats.	Rent-free holders.		Unoccupied.	Government.	Total.	Under-raiyats.
	As private lands.	Not as private lands.						Service tenure.	Other.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14
						(a) *Original.*							
Jessore : Muktimpur	...	16	530	...	2,724	...	...	23	957	29	11	11,253	5,689
Bishnum : Rampur Hat.	...	60	476	996	22,050	580	7,168	782	1,437	602	21	36,990	1,794
Hooghly : Government and temporarily-settled estates.	10	578	90	2	2,755	11	345	12	141	...	4	3,943	184
Hooghly : Zamindari estates.	...	17	314	...	745	...	...	5	66	...	2	1,149	70
South Monghyr ...	...	19	...	7	1,436	...	1	104	22	17	3	1,609	42
Patna	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahabad	316	10,189	3,702	45,711	219,307	111	1,084	4,598	9,016	27,154	3,061	313,204	9,872
Balasore : Bichhinpore Government Estate.	...	...	...	...	661	58	239	...	...	3	4	967	112
						(b) *Revisional.*							
Cuttack ...	1,497	5,633	19,567	35,030	196,254	34,962	1,014	2,703	30,660	4,453	1,330	283,221	11,521
Puri	2,289	7,738	25,871	38,996	244,524	7,258	2,271	5,896	32,462	13,304	2,250	444,481	22,403
Balasore	...	5	30	185	262	2	2	2	2	5	...	306	3
						(c) *Experimental Maintenance.*							
Balasore	1,826	27,835	16,460	35,109	197,258	5,373	6,326	2,654	6,115	5,136	706	300,363	14,109

APPENDIX V.

Showing the progress made in Recovery of Costs during the year ending 30th September 1911.

Division.	District.	Estate or tract under settlement.	Demand.			Collections.						Balance.		
			Landlords' share.	Occupiers' share.	Total.	Landlords' share.			Occupiers' share.			Grand Total collected.	Landlords' share.	Occupiers' share.	Total.
						Voluntary.	By certificate.	Total.	Voluntary.	By certificate.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Burdwan ...	Hooghly	Zamindari estates	...	1,617	1,617	...	...	...	1,022	...	1,022	1, 22	...	595	595
Ditto ...	Midnapore	Jamirapal ...	...	...	1,205	...	...	...	...	...	...	1,149	...	...	56
		Jhargram and Dhiara.	...	.....	29,782	...	...	...	...	...	...	29,140	...	...	2,642
Bhagalpur ...	Bhagalpur	South Bhagalpur	16,308	1,411	17,809	6,841	5,121	11,962	...	1,411	1,411	13,373	4,436	...	4,436
Ditto ...	Monghyr	South Monghyr ...	1,48,109	20,720	1,68,829	1,11,969	29,720	1,41,739	13,794	1,389	20,636	1,62,365	6,130	134	6,464
Patna ...	Patna	Patna	3,20,975	3,07,461	6,28,436	4,91,429	8,387	5,00,816	5,05,696	456	3,04,152	5,04,968	20,609	2,309	22,368
Chota Nagpur	Ranchi ...	Ranchi	1,20,483	22,850	2,23,255	1,14,482	3,842	1,18,324	22,215	...	22,215	2,11,139	12,111	35	12,146
Ditto ...	Singhbhum	Dhalbhum Estate	72,749	43,240	1,21,989	71,706	6,386	78,354	43,177	47	43,224	1,21,578	363	35	390*

* Out of this Rs. 310 was since recovered and Rs. 80 written off.

APPENDIX VI.

PART A.

Statement of some sales during the past ten years of Proprietary Rights collected during attestation in the year ending 30th September 1911.

Name of estate or tract under settlement.	Area under attestation during the year.	Area of villages in which statistics were collected.	Number of estates in the selected villages.	SALES OF ESTATES OR PORTIONS OF ESTATES.			WHETHER THE PURCHASER BELONGS TO THE CLASS OF—			
				Number of sales.	Land revenue transferred.	Price paid.	Landlord.	Raiyat.	Mahajan.	Lawyer.
1	2	3	4	5	6	7	8	9	10	11
	Sq. M.	Sq. M.	*Original Settlements.*			Rs.				
Shahabad	1,608	13	...	220	9,351	3,75,549	130	67	21	11
			Revisional Settlements							
Cuttack	496·41	46·25	1,617	426	4,201	73,546	297	13	16	...
Balasore	·59	·59	10	1	98	650	1	...	...	...
Puri	1,069·54	24·79	68	77	5,245	20,668	33	17	7	...
			Experimental Maintenance.							
Balasore	732·63	15·80	205	26	1,551	28,910	20	1	6	1

APPENDIX VI.

PART B.

Statement of mortgages during the past ten years collected during attestation in the year ending 30th September 1911

Name of estate or tract under settlement.	Area under attestation during the year in acres.	Number of holdings attested.	AREA, IN ACRES, HELD BY MORTGAGEES—						PROFESSION OF MORTGAGEE.							
			From proprietors.	From tenure-holders and under-tenure-holders.	From raiyats at fixed rates.	From settled raiyats.	From occupancy raiyats.	From non-occupancy raiyats.	Landlord.		Raiyat.		Mahajan.		Lawyer.	
									Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
						Original Settlements.										
Jessore: Mokimpur.	16,648	11,198	...	...	...	2·56	...	...	...	...	4	2·63	...	...	1	·24
Birbhum: Rampur Hat.	35,209	28,323	·27	0·67	32·35	276·39	1·18	2·56	1	·98	294	256·38	37	63·95	...	...
Shahabad ...	958,729	314,567	5,396	1,612	26,119	47,676	200	72	1,647	5,436	68,739	65,689	10,257	10,671	788	988
						Revisional Settlements.										
Cuttack	317,656	273,247	37·16	54·19	62·96	1,067·64	15·63	1·37	1·35	102·03	894	634·18	350	450·36	2	2·26
Balasore	3,938	1,499	...	...	...	6·53	...	...	...	...	6	6·53	...	..	...	...
Puri	627,386	486,539	8·77	72·92	119·66	437·79	3·91	...	67	153·71	940	330·89	84	294·89	1	2·26
						Experimental Maintenance.										
Balasore	481,716	314,469	3·13	47·95	15·95	478·05	25·67	·50	32	33·61	266	282·12	175	255·10	2	·64

APPENDIX VI.

PART C.

Statement of transfers of Occupancy Rights during the past ten years collected during attestation in the year ending 30th September 1911.

Name of district and settlement.	Area under attestation during the year in square miles.	Number of raiyati holdings attested.	Area of raiyati holdings attested in acres.	Number and area of holding transferred.				Profession of transferee.								Number of raiyats who still occupy their lands—		Price per acre of area transferred.	
				Entire holdings.		Part holdings.		Landlord.		Raiyat.		Mahajan.		Lawyer.		On cash rents.	On produce rents.	Whole holding.	Part of holding.
				Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
								Original Settlements.										Rs.	Rs.
Jessore: Mokimpur.	26·71	9,734	13,837	46	124·36	86	49·23	...	...	163	170	...	...	1	4·19	...	...	...	...
Birbhum: Rampur Hat.	133·14	28,323	68,408	1,445	3,332·36	2,144	3,254·77	65	154·07	2,813	4,462·79	709	1,537·27	2	6·77	...	...	40	66
Shahabad district.	1,435 (a)	382,428	650,465	1,562	3,506	3,645	3,506	134	384	4,325	7,371	439	1,135	99	226	6	1	194	194
Balasore: Bichitrapore Government Estate.	6·56	975	2,469	11	29·07	30	71·31	2	1·80	34	89·36	4	9·99	...	...	...	...	50	6
								Revisional Settlements.											
Cuttack ...	466·41	170,536	120,851	6,320	4,078	24,321	13,401	2,005	1,200	27,146	15,196	1,961	1,661	46	46	53	...	53	53
Balasore ...	·49	331	392	20	19	71	49	3	1	88	55	...	...	...	...	...	...	52	92
Puri	1,089·54	121,245	103,777	6,647	6,053	24,338	15,026	3,140	2,115	24,534	10,363	2,363	2,048	47	83	35	...	63	71
								Experimental Maintenance.											
Balasore ...	732·63	242,179	327,907	590	473	1,972	1,342	151	121	1,735	1,353	655	493	1	1	...	...	45	67

(a) Exclusive of figures for camp IV.

APPENDIX VII.

(*See* Chapter IV of the Report.)

Showing Mutations in Tenants' Rights for the year ending 30th September 1911

Government Estates.

Division and District.	Estate.	Total area of the estate in acres.	Total number of tenancies.	Number of mutations registered.										Percentage of mutations to total number of tenancies, col. 9 (a) & (b) on col. 4.	Total area in acres transferred.	Average price per acre of land sold.
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*			
Burdwan Division.																
Hooghly...	Government estates	212	268	...	...	26	...	..	...	...	...	26	...	10·45	7·32	...
Midnapore	6 estates	119,088	104,068	609	1,807	2,286	998	38	68	88	60	4,893	2,933	6·4	2,673	80 to 300
Presidency Division.																
Khulna	Chandikhali	1,657	46	...	2	...	...	...	...	...	...	...	2	4·16	9	13
Do.	Mamudabad... ...	3,457	139	...	...	1	1	...	...	...	...	1	1	1·43	96	...
Patna Division.																
Patna	37 estates	68,077	7,998	103	27	306	...	16	2	9	1	530	30	7·02	628	3 to 200
Gaya	7 „ „ „	80,750	4,474	23	133	397	6	22	9	4	...	356	146	8·90	1,556	77
Shahabad	16 „ „ „	17,850	1,210	5	25	48	1	...	1	...	...	47	27	6·11	218	60
Tirhut Division.																
Saran	Mudha	366	235	1	2	8	...	...	...	...	...	9	2	4·68	10	208
Do.	Makdhomgani ...	233	139	1	...	13	...	...	...	...	...	13	...	10·33	18	133
Do.	Kaithwalia	73	8	...	...	...	...	...	1	...	...	...	1	14·28	·37	...
Darbhanga	Bakhtiarpur ...	1,110	469	3	14	3	...	...	...	1	...	7	14	4·2	40·9	120
Ditto	Imadpatti	144	113	1	...	1	...	...	...	...	...	2	...	1·07	·60	20
Bhagalpur Division.																
Monghyr	Diara and other estates.	63,313	11,799	93	46	147	15	...	5	3	...	243	68	2·6	3,321	63 to 300
Bhagalpur	Bhagalpur Diara and Kahals.	33,588	1,467	14	22	16	...	1	...	...	...	31	33	3·76	631	11
Ditto	Madhipura khas mahals.	3,240	602	...	...	24	...	...	...	...	...	24	...	4	125	...
Purnea	2 estates	7,863	1,180	24	13	21	...	...	...	...	...	45	13	13·94	439	10 & 15
Darjeeling	Terai Jotes	194,876	845	...	106	5	101	2	...	...	5	7	224	26·15	4,768	63
Ditto	West Teesta Khas Mahal	15,696	1,888	6	2	3	...	...	...	1	...	10	2	·63	79	13
Ditto	Kalimpong Government estate.	114,216	6,623	57	43	102	14	4	17	14	12	177	91	4·4	1,969	125
Scottish Parganas* ...	Dumin-i-koh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ditto	Sahebganj Tauzi No. 300.	765	2,276	28	29	1	...	...	...	...	...	29	29	2·54	13	6 13
Ditto	10 other estates ...	1,983	727	3	3	3	...	...	...	...	...	6	3	1·25	24·20	12·8 to 612
Orissa Division.																
Cuttack	Banki...	75,630	(a)38,326	214	799	601	963	146	227	6	89	960	2,078	9·35	602	134
Ditto	Town Khas Mahal...	726	1,906	47	4	55	19	1	...	13	...	112	14	6·60	83	2,060
Balasore	Nayanunda Sirco ‡	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ditto	Chandbali	178	130	...	...	...	...	...	2	...	...	...	2	1·50	·28	200
Ditto	Bindrak Salt Gola	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Angul	Angul	379,327	31,761	11	40	350	1,175	...	...	15	...	374	1,254	6·40	5,396	60
Puri	Kodhar	5,577	797	1	2	1	...	...	...	...	...	2	2	·50	13	65
Do.	Khurda	365,358	193,639	197	715	19	20	3	11	2	4	321	746	·54	641	181
Do	Balukhand (Town)	574	361	3	...	2	...	...	...	...	...	7	...	2·22	1	...
Sambalpur	Malgunri	130,910	6,971	20	34	120	12	3	12	4	3	147	61	3·5	1,542	75
Ditto	Gaontiahi	36,469	38,923	162	456	1,029	67	4	168	43	36	1,215	714	5	15,615	35
Ditto	Saiyatwari	8,128	815	1	...	9	1	...	...	...	...	10	1	1·23	107	70
Ditto	Zamindari	909,289	24,691	235	339	465	23	9	86	16	10	735	459	4·7	13,136	40
Chota Nagpur Division.																
Hazaribagh	Kodarma	36,460	2,920	...	...	89	15	...	...	...	...	89	15	3·57	1,044	...
Palamau	Palamau and Balidehri.	972,371	16,931	38	14	566	607	18	39	2	...	906	660	8·19	6,870	12
	Total ...	3,339,768	466,720	2,092	4,393	8,417	3,864	361	717	280	189	19,980	9,063	4·02	63,125	3 to 2,060

* Headman system obtains in Dumin-i-koh. There is no mutation and figures are therefore omitted.
(a) Does not include revenue-free estates which were under settlement operations.
‡ No returns available. Figures omitted.

APPENDIX VII—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total area of the estate in acres.	Total number of tenancies.	NUMBER OF MUTATIONS REGISTERED.										Percentage of mutations to total number of tenancies, col. 9 (a)+(b) on col. 4.	Total area in acres transferred.	Average price per acre of land sold
				Sale.		Succession.		Partition.		Gift.		Total.				
				Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.	Whole.	Part.			
1	2	3	4	5		6		7		8		9		10	11	12
				a	*b*	*a*	*b*	*a*	*b*	*a*	*b*	*a*	*b*			
Burdwan Division.																
Midnapore	Pachetgar	208,144	48,891	77	128	4	9	...	...	2	3	83	140	0·45	263	100
Patna Division.																
Gaya	Mahaudpur	77,924	6,351	47	12	226	44	62	60	...	...	335	117	7·2	3,019	19
Do.	Deo Raja and Deo Rani's Estates.	61,254	9,226	53	119	190	...	10	29	36	...	218	148	3·9	915	15
Tirhut Division.																
Saran	Mozeukt	88	...	2	25	1	...	...	2	1	...	4	27	...	12	146
Do.	Hathwa	499,696	96,845	502	354	4,676	...	613	220	39	...	5,814	609	6·4	8,764	66
Do.	Chanparia	5,616	2,411	...	...	...	...	...	...	...	...	...	...	...	...	...
Do.	M. Hussain ...	1,953	349	1	24	...	...	...	...	...	...	1	24	7·1	5	500
Do.	Khajura	15,703	4,494	...	...	...	...	...	...	...	...	...	6	...	...	...
Muzaffarpur and Champaran.	Bettiah	1,275,632	228,510	270	500	931	...	...	46	43	...	1,114	415	0·6	1,816	27
Muzaffarpur	Mahiha	27,263	5,467	68	138	178	13	14	29	2	1	262	176	8·01	226	122
Ditto	Temkohi	8,510	3,763	18	88	23	9	1	3	1	...	43	100	3·8	60	100
Ditto	Sirsand (No. 1) ...	15,186	6,272	36	126	1	...	...	...	...	...	37	126	2·7	107	206
Ditto	Do. (No. 11) ...	6,004	3,026	3	27	...	...	...	...	...	...	3	27	·99	14	141
Patna, Darbhanga, Muzaffarpur and Monghyr.	Nathan	68,972	23,511	100	174	70	...	4	3	...	...	174	177	1·5	348	90
Bhagalpur Division.																
Monghyr	Ratan	5,184	4,122	30	6	276	...	...	...	...	...	306	6	7·09	312	10
Ditto	Bahadoorpur ...	51,648	19,366	275	73	465	3	...	5	...	...	671	79	4·01	1,198	11
Ditto	Sheikpura	15,725	9,541	45	24	104	1	...	4	...	...	149	29	1·85	382	16
Ditto	Chapnon	14,926	4,804	27	4	26	1	...	...	...	...	53	5	1·2	103	17
Bhagalpur	Panjwara	21,346	1,975	11	33	93	...	10	13	...	...	114	33	8	132	61
Ditto	Murho	6,839	2,906	4	...	127	...	...	...	...	...	131	...	5·8	547	46
Ditto	Lugma	2,940	1,956	15	33	24	...	...	76	...	...	47	57	2·7	209	46
Ditto	Kharakpur ...	63,414	14,779	197	...	31	...	...	...	...	...	228	...	1·44	932	19
Ditto	Sirahpur	2,969	1,421	5	20	35	...	...	2	...	...	30	31	4·84	178	...
Ditto	Kasari	62,541	23,403	69	7	150	...	1	3	...	...	220	10	1·02	212	53
Southal Parganas ...	Rohini	53,589	4,238	39	...	5	...	...	...	...	...	25	...	·59	11	540
Ditto	Garara	10,723	...	...	1	...	...	...	...	...	...	...	1	·01	30	...
Ditto	Pakeur	15,911	11,838	53	75	3	1	...	...	4	1	60	77	1·15	122	98
Ditto	N. Santara	51,713	145	...	...	4	1	...	...	...	...	4	1	·01	5·29	...
Ditto	Yemsi	21,343	950	...	3	...	...	...	...	...	...	3	...	·12	100	...
Orissa Division.																
Cuttack	Dompara	52,469	8,466	53	275	634	16	2	3	...	...	737	288	12	190	80
Ditto	Barpur	69,737	25,338	225	189	755	...	...	...	5	...	985	189	4·03	3,171	80
Puri	Dykes, Husband ...	14,619	6,705	131	1,027	326	1	...	1	...	3	453	1,032	10·07	399	93
Do.	Sarbarahkari ...	37,601	183	13	19	...	...	...	7	...	...	13	26	1·06	...	...
Do.	Sarbarahkari Tenures.	9,451	3,644	76	338	1	...	...	...	5	...	80	338	11·40	194	101
	Garh, Ghoredalah and Kalupara.															
Do.	Parhud	35,424	6,086	79	198	240	...	1	...	...	...	320	198	7·33	285	26
Chota Nagpur Division.																
Ranchi	Orendaru	7,272	187	...	...	33	...	...	...	...	...	33	...	17·6	...	...
Do.	Jamapiri	6,407	208	...	...	1	...	...	...	...	...	1	...	·39	...	...
Do.	Jaria	385,738	9,940	...	28	27	...	...	...	...	...	51	...	1·03	...	...
Do.	Sasahatu	31,728	906	...	...	13	...	...	...	...	...	13	...	1·39	...	...
Do.	Sirs	40,740	772	1	...	...	...	...	...	...	...	1	...	·19	...	...
Do.	Burhadih	16,876	398	...	...	...	...	...	...	...	...	...	...	3·01	...	...
Do.	Jamadeg	6,654	334	...	...	12	...	...	...	...	...	12	...	...	...	...
Do.	Mandhan	16,876	397	...	...	3	...	...	...	...	...	3	...	·6	...	...
Do.	Sarjamdih	20,861	738	...	...	3	...	...	...	...	...	3	...	·7	...	...
Do.	Bero	696,484	5,175	...	43	9	...	...	...	...	...	9	...	1·1	...	...
Do.	Jonha	21,018	426	...	...	44	...	...	...	...	...	44	...	9·09	...	...
Do.	Silli	49,845	1,075	1	...	1	...	...	...	...	...	1	...	·2	...	...
Do.	Kanchanbahan ...	5,518	190	...	...	3	...	...	...	...	...	3	...	·6	...	...
Do.	Tarsi	35,846	225	...	...	1	...	...	...	...	...	1	...	·4	...	...
Do.	Tora	7,693	264	...	...	10	...	...	...	...	...	10	...	3·7	...	...
Do.	Toto, B. N. J. ...	12,674	786	...	...	11	...	...	...	...	...	11	...	1·5	...	...
Do.	Arvasi	26,558	3,525	...	...	114	...	...	...	...	...	114	...	3·5	...	...
Do.	Nasmano	17,224	748	...	...	12	...	...	...	...	...	12	...	1·6	...	...
Do.	Lochatu	6,329	437	...	...	12	...	...	...	...	...	12	...	2·8	...	...
Do.	Taisar	70,672	1,393	...	...	26	...	...	...	...	...	26	...	2·1	...	...
Do.	Sasha	34,929	170	...	...	1	...	...	...	...	...	1	...	·5	...	...
Do.	Barkikesra	18,392	912	...	...	6	...	...	...	...	...	6	...	2·5	...	...
Do.	Kulmunda	30,623	206	...	...	1	...	...	...	...	...	1	...	·4	...	...
Do.	Tamar	331,279	1,027	...	...	6	...	...	...	...	...	6	...	·5	...	...
	Total ...	4,687,675	827,565	2,499	3,899	9,789	98	812	468	172	8	12,984	4,482	2·8	27,926	19 to 546

APPENDIX VIII.

[*See* Chapter IV of the Report.]

Showing Resettlement of Vacant Tenancies during the year ending 30th September 1911.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RESETTLED DURING THE YEAR.		VACANT TENANCIES RESETTLED DURING THE YEAR.	
		Number	Area in acres	Number.	Area in acres.
1	2	3	4	5	6
Patna Division.					
Patna	Government Estates	53	80	45	79
Gaya	Ditto ...	98	279	95	250
Shahabad	Ditto ...	2	2	1	1
Tirhut Division.					
Darbhanga	Bukhtiarpur ...	1	1	1	2·8
Bhagalpur Division.					
Monghyr	Town Khas Mahal Diara Estate.	3	1	3	11
Bhagalpur	Bhagalpur Diara Tauzi No. 346.	12	49	2	48
Ditto	Supaul Khas Mahals	1	2	1	2
Ditto	Madhipura Khas Mahals	1	3	1	3
Purnea	Belwa Harinkhori	2	3	2	3
Do.	Bagmara	2	3	2	3
Orissa Division.					
Cuttack	Banki ...	76	16	76	16
Balasore	Nayananda Birso...	1	1	...	...
Angul	Angul ...	192	810	126	544
Puri	Khurda ...	1	1	1	1
Do.	Balukhand ...	2	1	1	1
Sambalpur	Malguzari ...	1	17	1	17
Ditto	Gauntahi ...	3	29	2	9
Ditto	Zamindari ...	20	207	13	119
Chota Nagpur Division.					
Hazaribagh ...	Kodarma ...	71	57	71	57
Palamau	Palamau and Baldehri.	483	1,990	409	1,645
	Total ...	1,026	3,552	853	2,896

APPENDIX VIII—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	VACANT TENANCIES TO BE RESETTLED DURING THE YEAR.		VACANT TENANCIES RESETTLED DURING THE YEAR.	
		Number.	Area in acres.	Number.	Area in acres.
1	2	3	4	5	6
Burdwan Division.					
Midnapore	Pachetgarh ...	90	61	26	28
Patna Division.					
Gaya	Maksudpur ...	333	1,608	52	304
Do.	Deo Raja's and Deo Rani's Estates.	15	94	10	74
Tirhut Division.					
Saran	Mashrakh ...	4	10	1	8
Do.	Hathwa ...	935	1,612	730	1,262
Do.	Chautaria ...	8	36	...	...
Do.	M. Hussain ...	1	6	...	...
Do.	Khojwa ...	12	24	4	17
Muzaffarpur and Champaran.	Bettiah ...	405	784	425	595
Muzaffarpur ...	Mahtha ...	78	72	12	11
Ditto	Tamkohi ...	83	263	55	109
Patna, Darbhanga, Muzaffarpur and Monghyr.	Narhan ...	248	259	82	165
Bhagalpur Division.					
Monghyr	Ratan ...	177	137	25	89
Ditto	Bahadoorpur ...	782	3,041	82	329
Ditto	Shakarpura ...	85	547	35	60
Ditto	Chapraon ...	149	960	1	3
Bhagalpur	Panjwara ...	96	194	3	1
Ditto	Murho ...	161	277	10	16
Ditto ...	Sonbarsa ...	258	441	101	308
Ditto	Shahpur ...	6	6	6	6
Ditto	Barari ...	84	23	24	4
Sonthal Parganas ...	Pakour ...	259	95	4	2
Orissa Division.					
Cuttack ...	Dompara Wards Estate.	2	1	2	1
Ditto ...	Darpan ...	33	27	7	12
Puri	Delang (Hustabad Sarbarahkari).	6	3	2	2
Do.	Parikud ...	10	27	...	...
	Total ...	4,300	10,608	1,699	3,406

APPENDIX IX.

[*See* Chapter IV of the Report.]

Showing New Settlements of Waste Lands during the year ending 30th September 1911.

GOVERNMENT ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of new tenancies on new lands settled.	Total area of such tenancies (acres).	REMARKS. (Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Burdwan Division.				
Midnapore ...	Four estates ...	12	148	Settlement rates.
Patna Division.				
Patna ...	Government Estates	365	560	Settlement rates.
Gaya ...	Ditto ...	153	660	Prevailing rates of the adjoining lands.
Shahabad ...	Ditto ...	19	10	Ditto.
Tirhut Division.				
Darbhanga ...	Bukhtiarpur ...	133	219	Settlement rates.
Bhagalpur Division.				
Monghyr ...	Town Khas Mahals and Diara estates.	464	805	Settlement rates.
Bhagalpur ...	Khas Mahal Madhepura, Tauzi No. 2781.	2	1	Otherwise.
	Supaul Khas Mahal, Tauzi No. 3884.	22	54	
Purnea ...	Behra Harinkhori ...	74	199	
Do. ...	Bagmara ...	1	5	
Darjeeling ...	Kalimpong Khas Mahals.	103	697	Settlement rates.
Sonthal Parganas	Government Estates	7	10	
Orissa Division.				
Cuttack ...	Cuttack Town Khas Mahal.	1	1	Otherwise.
Ditto ...	Banki	16	8	Settlement rates.
Angul ...	Angul	88	172	
Puri ...	Khurda ...	77	68	
Do. ...	Kodhar ...	4	3	
Do. ...	Balukhand ...	2	1	
Sambalpur ...	Malguzari ...	71	242	Otherwise.
Ditto ...	Goontiahi ...	203	192	
Ditto ...	Raiyatwari ...	74	1,217	Settlement rates.
Ditto ...	Zamindari ...	229	270	Otherwise.
Chota Nagpur Division.				
Hazaribagh ...	Kodarma ...	26	60	Mostly at settlement rates.
Palamau ...	Palamau and Baldehri	125	171	Settlement rates.
	Total ...	2,271	5,768	

APPENDIX IX—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of new tenancies on new lands settled.	Total area of such tenancies (acres).	REMARKS. (Explanatory of the mode of settlement, *i.e.*, whether rent was fixed according to settlement rates or otherwise.)
1	2	3	4	5
Burdwan Division.				
Midnapore ...	Pachetgarh ...	23	8	Settlement rates.
Patna Division.				
Gaya ...	Makandpur ...	56	15	Otherwise.
Do. ...	Deo Raja's and Deo Rani's Estate.	17	65	Otherwise.
Tirhut Division.				
Saran ...	Maghrakh ...	2	2	Otherwise.
Do. ...	Hathwa ...	437	785	Otherwise.
Do. ...	Khajwa ...	2	1	Settlement rates.
Muzaffarpur and Champaran.	Bettiah ...	336	410	Otherwise.
Muzaffarpur ...	Mahtha ...	8	6	Otherwise.
Patna, Darbhanga, Muzaffarpur and Monghyr.	Narhan ...	133	219	Settlement rates.
Bhagalpur Division.				
Monghyr ...	Ratan ...	16	69	Settlement rates.
Ditto ...	Bahadurpur ...	80	481	
Ditto ...	Shakerpura ...	37	156	
Ditto ...	Chapraon ...	23	113	
Bhagalpur ...	Panjwara ...	14	289	Otherwise.
Ditto ...	Lugma ...	5	12	
Ditto ...	Shahpur ...	6	8	
Ditto	Sonbarsa ...	74	93	
Ditto ...	Barari ...	102	302	
Southal Parganas	Rohini ...	39	25	Otherwise.
Ditto ...	Pakour ...	53	28	Settlement rates.
Orissa Division.				
Cuttack ...	Darpan ...	10	8	Settlement rates.
Puri ...	Delang-Hustabad ...	7	8	Otherwise.
Do. ...	Do. Sarbarahkari	2	1	Otherwise.
Chota Nagpur Division.				
Ranchi ...	Jeria ...	2	4	
	Total ...	1,491	3,108	

APPENDIX X.

[*See* Chapter IV of the Report.]

Showing the results of the inspection of rent-rolls for the year ending 30th September 1911.

Government Estates.

Division and District.	Estate.	Total number of villages in the estate.	Total number of tenants.	Check by Tahsildars and other subordinate Agency.				Check by Managers and other superior Agency.			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.
1	2	3	4	5	6	7	8	9	10	11	12
Burdwan Division.											
Midnapore ...	Six estates ...	1,321	104,336	1,222	77,729	74	1,618	961	18,159	11	178
Hooghly ...	Grand Trunk Road side lands.	60	315	60	316	100	...	20	95	30	...
Presidency Division.											
Khulna ...	Chanchkhali* ...	10	48	100	48	100	...	...	...	...	...
Do. ...	Mamudshahi* ...	5	139	100	139	100	...	...	...	...	...
Patna Division.											
Patna ...	Government estates	99	8,404	95	7,714	90	564	64	3,756	39	7
Gaya ...	Ditto ...	108	5,167	98	4,717	91	62	88	2,944	55	61
Shahabad ...	Ditto ...	14	1,810	...	...	...	...	14	1,810	100	46
Tirhut Division.											
Saran ...	Mudha ...	2	235	2	235	100	...	2	235	100	...
Do. ...	Muk-dum ranj ...	3	130	3	130	100	...	3	128	100	...
Do. ...	Kamlachak ...	2	9	2	9	100	...	...	...	...	...
Do. ...	Gosaura ...	1	41	1	41	100	...	...	...	...	...
Do. ...	Kaithwalia ...	1	8	1	8	100	...	...	...	...	...
Do. ...	Saugra ...	6	315	6	315	100	...	...	...	...	...
Darbhanga ...	Bakhtiarpur ...	3	489	3	489	100	...	3	489	100	...
Ditto ...	Hardaspur ...	1	1	1	1	100	...	1	1	100	...
Ditto ...	Imadpatti ...	2	112	2	114	100	...	2	112	100	...
Bhagalpur Division.											
Monghyr ...	Town Khas Mahals and diara estates.	98	13,709	73	6,746	57	404	42	1,035	9	69
Bhagalpur ...	Railway "B" Class land, Tauzi No. 6575.	21	93	21	93	100	...	21	93	100	...
Ditto ...	Bhagalpur Diara Khas mahal.	6	1,407	6	1,407	100	102	6	1,407	100	...
Ditto ...	Bhagalpur Gachar Khas Mahal & Banka.	7	25	7	25	100	...	7	25	100	...
Ditto ...	Madhipura Khas Mahal.	14	602	...	...	...	...	4	100	17	...
Ditto ...	Supaul Khas mahal ...	19	234	19	234	100	...	19	234	100	...
Purnea ...	Belwa Mariahkeri ...	3	1,078	3	670	56	21	...	...	...	...
Do. ...	Sarsara ...	9	109	9	96	88	12	...	...	...	...
Darjeeling ...	Terai Jotes ...	845	3,246	380	1,516	47	21	141	388	12	6
Ditto ...	West Jeesta Khas Mahals.	21	1,388	21	1,388	100	...	20	1,388	57	...
Ditto ...	Kalimpong Khas mahal.	48	6,022	48	6,022	100	24	48	5,856	7	...
Sonthal Pargunas...	Amanat Sarkar Serjamdi.	1	181	1	181	100	...	1	33	20	...
Ditto ...	Amanat Sarkar Media	1	167	1	167	100	...	1	36	34	...
Ditto ...	Giridine Fudtipur ...	3	73	3	73	100	...	2	14	19	...
Ditto ...	Jagirnath Habtidar	1	15	1	15	100	...	...	...	...	...
Ditto ...	Sayedpur ...	1	93	1	93	100	...	1	18	19	...
Ditto ...	Nya Bazar ...	1	27	1	27	100	...	1	18	30	...
Ditto ...	Railway "B" Class land.	9	127	9	127	100	...	3	11	9	...
Ditto ...	Bilspur relinquished land.	1	6	1	6	100	...	...	...	...	...
Ditto ...	Sahebganj, Tauzi No. 569.	8	2,276	8	2,276	100	...	8	356	16	...
Ditto ...	Other Khas Mahal, Tauzi No. 117.	2	50	2	50	100	...	...	...	...	...
Orissa Division.											
Cuttack ...	Banki ...	144	23,170	136	11,997	51	536	106	3,447	15	73
Ditto ...	Town Khas Mahals ..	35	3,143	35	3,181	100	36	35	980	29	...
Balasore ...	Bhograi ...	196	11,783	...	...	...	...	103	3,364	16	39
Angul ...	Angul ...	683	31,781	681	31,137	97	1,157	5	45	0	...
Puri ...	Khurdhar ...	18	757	18	757	100	...	5	45	6	...
Do. ...	Raichand ...	1	361	1	361	100	...	1	99	7	...
Sambalpur ...	Maliasari ...	116	3,371	116	3,366	99	280	45	1,256	22	12
Ditto ...	Gaurjhola ...	611	38,623	611	38,593	99	1,939	215	19,450	57	262
Ditto ...	Kuraiwari ...	15	353	15	361	98	11	1	1	1	...
Ditto ...	Zamindari ...	994	24,601	994	24,167	97	1,204	154	4,125	16	206
Chota Nagpur Division.											
Hazaribagh ...	Kodarma	101	2,920	61	1,763	60	107	13	561	19	...
Palamau ...	Palamau and Baldeoji	309	16,931	309	16,931	100	...	154	5,692	3	...

APPENDIX X—*concluded.*

WARDS' ESTATES.

DIVISION AND DISTRICT.	ESTATE.	Total number of villages in the estate.	Total number of tenants.	CHECK BY TAHSILDARS AND OTHER SUBORDINATE AGENCY.				CHECK BY MANAGERS AND OTHER SUPERIOR AGENCY.			
				Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.	Number of villages.	Number of tenants.	Percentage of tenants checked to total.	Number of unreported mutations detected.
1	2	3.	4	5	6	7	8	9	10	11	12
Burdwan Division.											
Midnapur ...	Pachetgarh	485	48,981	..	29,612	60	...	...	2,9412	60	...
Patna Division.											
Gaya	Makeudpur	82	6,251	65	4,710	75	...	12	707	11	...
Do.	Deo Raja's and Deo Rani's Estate	65	9,220	...	...	...	...	43	7,335	35	...
Tirhut Division.											
Saran	Hathwa	1,186	90,748	686	46,861	48	2,994	261	6,614	8·20	396
Do.	Chautaria	86	2,411	9	289	22	...	...	...	...	...
Do.	Mobarak Hussain ...	3	240	3	97	25	...	...	...	...	...
Do.	Khajwa	40	4,584	9	571	15	...	...	...	...	...
Muzaffarpur and Champaran.	Bettiah	1,849	329,361	23	5,115	1	272	91	6,492	2	923
Muzaffarpur ...	Mahtha	96	5,467	58	3,979	54	197	16	285	5	19
Ditto ...	Tasra Kohi ...	77	3,703	24	1,991	345	...	4	491	13	...
Ditto ...	Sursand (No. I) ...	157	6,578	...	...	...	...	12	975	15	51
Ditto ...	Do. (No. II.) ...	3,036	...	...	...	...	...	2	67	2	2
Patna, Darbhanga Muzaffarpur and Monghyr.	Nathan	196	23,511	194	22,760	97	2,042	67	2,321	12	389
Bhagalpur Division.											
Monghyr	Ratan	176	6,132	176	2,190	35	...	176	331	6	...
Ditto	Bahadoorpur	41	9,268	41	6,468	70	...	4	1,019	11	...
Ditto	Shakarpura	21	2,841	21	1,806	63	...	21	246	19	...
Ditto	Chapraon	102	4,904	102	3,337	66	...	102	441	9	...
Bhagalpur	Panjwara	40	1,875	40	1,875	180	...	...	998	46	...
Ditto ...	Marho	16	2,206	...	131	6	...	...	131	6	...
Ditto ...	Lagma	22	1,989	22	1,989	100	...	22	1,989	100	...
Ditto ...	Sonbarsa	123	16,779	50	7,649	40	...	...	...	...	...
Ditto ...	Shahpur	27	1,421	27	1,421	100	...	27	1,421	100	...
Ditto ...	Berari	608	25,438	553	16,296	64	...	112	1,627	7	...
Sonthal Parcanas	Pakour	32	11,833	32	11,833	100	32	32	1,488	12	4
Orissa Division.											
Cuttack	Dompara	28	6,390	28	4,850	68	...	7	1,393	25	...
Ditto	Darpan	373	23,288	277	20,334	80	878	145	1,727	7	130
Puri	Delang Hastabad ...	120	8,795	...	...	...	...	7	303	3	...
Do.	Parikud estate ...	65	6,066	65	6,066	100	...	54	4,044	66·70	...

APPENDIX XI.

[*See* Chapter V of the Report.]

Result of Inspection of Boundary Marks during the year ending the 30th September 1911.

Division and District.	Total number of estates surveyed under the Survey Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 2.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
GOVERNMENT AND TEMPORARILY-SETTLED ESTATES.										
Burdwan Division.										
Burdwan ...	Not reported.	12	394	394	283	98	13	14	Rs. 65-15-0. Met from Khas mahal and petty settlement grants.	Three persons were prosecuted and fined Rs. 30 each.
Birbhum ...	3	3	14	14	12	2	...	2	Rs. 7. Met from Government grant.	...
Bankura ...	10	10	47	47	47	...	...	...	.....	...
Midnapore ...	64	64	2,838	1,519	1,377	88	54	142	Rs. 193-5-4 ...	...
Hooghly ...	31	30	322	29	18	...	2	2	.....	...
Howrah ...	2	2	7	7	1	6	...	...	.....	...
										...
Presidency Division.										
24-Parganas ...	35	33	2,218	1,960	1,864	121	175	3	Rs. 1-12-3 ...	
Nadia	67	32	894	710	646	63	1	57	Rs. 434-0-0 ...	...
Murshidabad ...	100	78	868	492	482	2	8	...	... ...	...
Jessore ...	2	28	28	28	26	2	...	...	.....	...
Khulna ...	56	42	312	211	175	(a)17	(a)19	...	.....	...
										...
Patna Division.										
Patna	52	22	575	575	572	2	1	1	.....	
Gaya	21	21	1,562	1,361	1,354	...	7	4	.....	...
Shahabad ...	150	62	881	781	761	3	17	8	Rs 7-0-0 ...	...
										...
Tirhut Division.										
Saran	18	8	311	311	280	20	11	20	.....	
Darbhanga ...	3	3	71	71	71	...	...	...	.....	...
										...
Bhagalpur Division.										
Bhagalpur ...	27	26	98	49	19	7	21	3	.....	
Darjeeling ...	2	2	137	126	126	...	...	...	.....	...
Santhal Parganas ...	3	3	4,253	1,407	1,404	...	3	...	.....	...
										...
Orissa Division.										
Cuttack ...	Not reported.	Not reported.	8,585	2,123	1,963	140	20	17	.....	
Balasore ...	3,605	1,560	7,005	4,386	4,325	7	54	22	.....	...
Angul	1	2	2,620	304	290	14	...	...	.....	...
Puri	488	488	4,015	2,475	2,448	19	8	88	Cost borne by Settlement Department and the Sarbarakars.	...
									.....	...
Sambalpur ...	1,936	1,878	58,273	58,273	57,968	300	5	109		
Chota Nagpur Division.										
Hazaribagh ...	3	3	2,011	1,166	1,143	22	1	7	.....	
Ranchi	3	3	201	110	107	3	...	3	.....	...
Palamau ...	2	2	17,125	17,125	13,063	3,951	111	4,068	Rs. 23 viz:— Rs. 18, met from the improvement grant. Rs. 5 realised from tenants.	...
Singhbhum ...	1	1	2,634	2,339	2,059	265	15	223	Rs. 291-0-1. Cost borne half-and-half by Government and the private estates concerned.	...
Total ...	6,859	4,422	113,270	98,381	92,689	5,152	546	5,778		

N. B.—The figures against "Total" in columns 2 and 3, are not complete for want of figures in certain cases.
(a) The damaged or missing pillars are pillars damaged and deluviated by the action of the Baleswar river.

Division and District.	Total number of estates surveyed under the Survey or Tenancy Acts.	Total number of estates in which permanent boundary marks were erected.	Number of marks erected in the estates mentioned in column 2.	Number of marks inspected during the year.	Result of inspection of the marks shown in column 5.			Number of damaged or missing marks restored.	Cost of restoration and how met.	Result of prosecution, if any.
					Number in fair order.	Number damaged.	Number missing.			
1	2	3	4	5	6	7	8	9	10	11
Burdwan Division.				WARDS' ESTATES.						
Midnapore ...	2	2	996	996	671	...	325	...	.....	...
Patna Division.										
Gaya	114	129	711	653	486	18	169	...	.....	...
Shahabad ...	28	15	553	553	349	2	202	3	.....	...
Tirhut Division.										
Saran	347	347	12,019	9,132	8,760	334	338	60	Rs. 45-4-6 ...	...
Champaran ...	1,692	1,693	Not known	7,890	5,935	947	1,008	(a) ..	Rs. 1,076-0-0 ...	...
Darbhanga ...	1	136	816	816	759	...	57	49	Rs. 68. Met by Narhan estate.	...
Bhagalpur Division.										
Bhagalpur ...	355	341	2,319	2,242	2,069	21	152	12	Rs. 195. Met out of estate funds.	...
Sonthal Parganas ...	6	6	1,547	123	99	5	19	20	Rs. 60. Met from the mustajirs at Pakour.	...
Orissa Division.										
Cuttack ...	Not reported.	Not reported.	478	105	97	7	1	1	.....	...
Chota Nagpur Division.										
Ranchi	39	39	1,668	1,668	1,668	...	...	...	.....	...
Total ...	2,784	2,706	20,507	24,978	20,773	1,334	2,471	160		
Burdwan Division.				ZAMINDARI ESTATES.						
Burdwan ...	70	49	230	230	228	...	2	...	.....	...
Pirbhum ...	Not known	Not known	842	842	562	5	275	280	Nearly the whole cost was met from settlement funds.	...
Bankura ...	80	80	362	362	361	...	1	...	.....	...
Midnapore ...	66	66	288	288	281	7	...	...	.....	...
Hooghly ...	...	...	849	115	106	6	3	...	.....	...
Presidency Division.										
Nadia	2	2	37	37	36	...	1	...	.....	...
Murshidabad ...	11	11	1,379	1,370	1,074	...	296	...	.....	...
Jessore	Not reported.	19	469	233	230	2	1	..	Rs. 16, paid by the owners of contiguous lands.	...
Khulna ...	6	6	344	4	4	...	...	...	.....	...
Tirhut Division.										
Saran	5,805	5,805	Not known	5,011	4,311	429	241	...	.....	...
Champaran ...	Not known	Not known	Ditto	3,164	2,767	211	186	179	Cost borne by zamindars.	...
Bhagalpur Division.										
Bhagalpur ...	Ditto	Ditto	5,324	3,312	3,213	...	99	4	Rs. 36, paid by zamindars.	...
Sonthal Parganas ..	369	449	14,451	537	530	...	7	7	Rs. 22 Realized from sardars at Dumka.	...
Orissa Division.										
Cuttack	Not reported.	Not reported.	604	9	7	...	2	..	.....	...
Chota Nagpur Division.										
Ranchi	1	1	6,519	2,384	2,367	17	...	17	.....	...
Singhbhum ...	3	3	4,663	4,663	4,601	122	40	56	Rs. 59-11-0 ...	...
Total ...	6,513	6,511	35,031	22,661	20,778	829	1,154	543		
Grand Total ...	15,766	13,639	1,73,838	1,45,320	1,34,634	7,315	3,971	5,471		

(a) Some pillars have been sent out to Thikadars and Tahsildars to replace.
N.B.—The figures against "Total" and "Grand Total" in columns 2, 3, and 4 are not complete for want of figures in certain cases.

APPENDIX XII.

Statement showing progress of Survey and Settlement work in the Province by districts and divisions up to 30th September 1912.

District.	Total area of district (in square miles).			Area which has been cadastrally surveyed and for which a record-of-rights has been prepared or which has been settled under the Regulations up to 30th September 1911 (in square miles).			Area covered by topographical survey or forest survey for which no record-of-rights has been prepared up to 30th September 1911 (in square miles).			Area outstanding (in square miles).		
	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.	Permanently settled.	Not permanently settled.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
Burdwan Division.												
Burdwan	2,689	30	2,689	75	19	94	...	...	...	2,594	1	2,595
Birbhum	1,749	3	1,752	72	1	73	...	...	...	1,677	2	1,679
Bankura	2,891	30	2,921	25	13	38	...	...	...	2,870	7	2,883
Midnapore	4,555	691	5,186	468	601	1,069	...	...	...	4,117	...	4,117
Hooghly	1,181	10	1,191	33	9	42	...	...	...	1,148	1	1,149
Howrah	509	1	510	...	...	...	...	...	...	509	1	510
Divisional Total ...	13,294	655	13,949	673	643	1,316	...	...	...	12,621	12	12,633
Presidency Division.												
24-Parganas	2,949	1,855	4,804	69	76	145	..	1,628	1,628	2,920	91	3,011
Nadia	2,793	...	2,793	...	...	...	...	...	...	2,793	...	2,793
Murshidabad	2,863	63	2,748	86	62	148	...	...	...	1,997	...	1,997
Jessore	2,925	3	2,925	39	...	39	...	...	...	2,883	3	2,886
Khulna	2,401	2,365	4,765	92	57	149	...	2,364	2,364	2,309	64	2,373
Divisional Total ...	13,131	4,280	17,670	286	175	459	...	3,992	3,992	12,901	158	13,059
Patna Division.												
Patna	1,936	119	2,055	1,936	119	2,055	...	...	...	...	...	...
Gaya	4,020	92	4,112	719	92	811	30	...	30	3,271	...	3,271
Shahabad	4,768	211	4,979	653	180	833	142	...	142	3,537	32	3,569
Divisional Total ...	10,725	422	11,146	3,158	391	3,549	172	...	172	7,408	32	7,440
Tirhut Division.												
Saran	2,633	41	2,674	2,439	41	2,480	194	...	194	...	...	...
Champaran	3,828	3	3,831	3,597	3	3,600	231	...	231	...	...	...
Muzaffarpur	3,004	31	3,035	3,002	...	3,002	2	31	33	...	...	...
Darbhanga	3,309	60	3,369	3,303	...	3,303	5	60	65	...	...	...
Divisional Total ...	12,773	135	12,908	12,341	44	12,385	432	71	523	...	...	...
Bhagalpur Division.												
Monghyr	3,740	95	3,835	3,720	95	3,815	20	...	20	...	...	...
Bhagalpur	4,114	42	4,156	3,710	42	3,752	400	...	400	...	...	...
Purnea	4,732	362	4,894	4,731	14	4,745	...	249	249	...	...	...
Darjeeling	...	1,164	1,164	...	405	405	...	425	425	...	321	321
Southal Parganas ...	4,087	1,383	5,470	3,953	1,196	5,151	...	...	...	134	215	349
Divisional Total ...	16,674	2,947	19,621	16,150	1,757	17,877	420	674	1,094	134	536	670
Orissa Division.												
Cuttack	1,364	2,300	3,664	488	2,300	2,788	740	...	740	138	...	138
Balasore	878	1,709	2,087	165	1,709	1,965	210	...	210	...	...	...
Angul and Khondmals...	...	1,702	1,702	...	699	699	...	237	237	...	800	800
Puri	460	2,998	3,409	19	2,998	3,017	456	...	456	24	...	24
Sambalpur	...	3,824	3,824	...	2,986	2,986	...	463	463	...	375	375
Divisional Total ...	2,702	11,533	13,706	668	9,853	10,521	1,416	696	2,112	162	1,175	1,337
Chota Nagpur Division.												
Hazaribagh	6,357	164	7,921	28	56	84	...	72	72	6,329	56	6,385
Ranchi	7,104	...	7,104	7,104	...	7,104	...	...	...	...	...	...
Palamau	4,231	613	4,844	...	294	294	...	319	319	4,231	...	4,231
Manbhum	3,673	275	4,147	636	...	636	...	...	...	3,511	...	3,511
Singhbhum	2,578	1,935	4,297	2,335	1,213	3,548	227	752	979	...	...	...
Divisional Total ...	24,693	2,951	27,643	10,103	1,563	11,666	227	1,143	1,370	14,630	...	14,630
PROVINCIAL ...	93,992	22,923	116,175	43,904	14,426	57,330	2,787	6,616	9,343	47,764	1,968	49,732

N.B.—The areas shown in this Appendix are approximate and liable to some modification later.

B. S. Press—22-12-1911—2486J—395—T. W. L

ANNUAL REPORT

OF THE

DIRECTOR OF SURVEYS, BENGAL,

ON THE

SURVEY OPERATIONS IN BENGAL (OTHER THAN CADASTRAL SURVEYS)

DURING THE YEAR

1910-1911.



CALCUTTA:
BENGAL SECRETARIAT BOOK DEPÔT.
1911.

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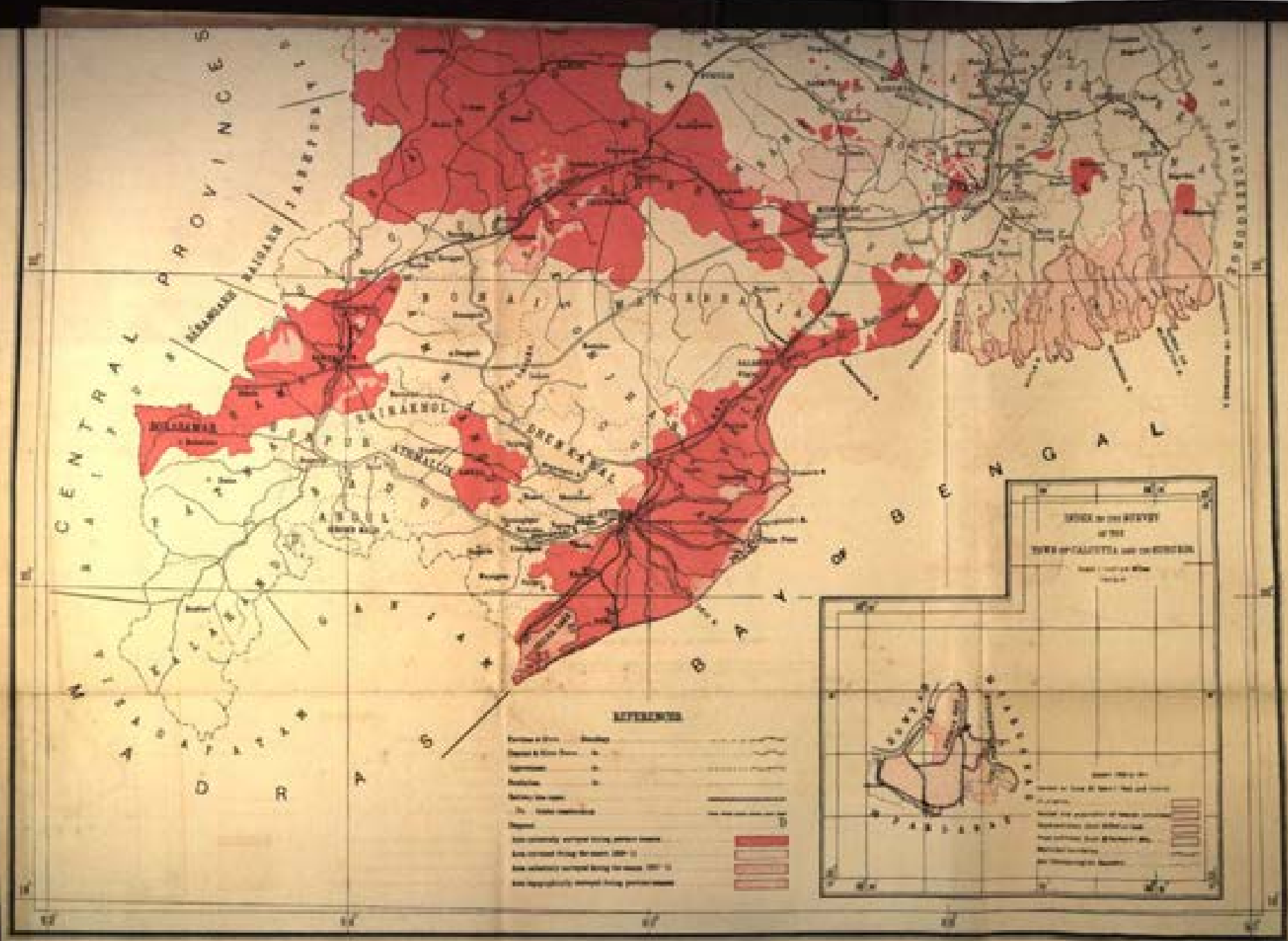
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SURVEY MAP




CENTRAL PROVINCES
BERAR
HYDERABAD
BOMBAY
BENGAL
BAY OF BENGAL
ARABIAN SEA
MADRAS
SAMBALPUR
SUKMA
ANGUL
KEONJHAR
REFERENCES

No. 1420
T. R.—7.

FROM LIEUTENANT-COLONEL R. T. CRICHTON, C.I.E., I.A.,
Director of Surveys, Bengal,

TO THE SECRETARY TO THE BOARD OF REVENUE, LOWER PROVINCES.

Dated Dinapore, the 3rd November 1911.

SIR,

I HAVE the honour to submit my report on the Survey Operations in Bengal for the survey year ending 30th September 1911.

2. I have been in charge for the whole period except for the first 20 days, during which Captain R. Foster, I.A., Assistant Director of Surveys, was officiating for me while I was on leave.

3. The outturn of 3,618 square miles of traverse survey is up to programme, and is practically the same outturn as the 3,635 square of the previous year.

4. The cost rates of Hazaribagh and Shahabad are Rs. 30·5 and Rs. 35·7 as against Rs. 35·2 and Rs. 36·5 of the foregoing season. The reduction of Rs. 4·7 per square mile for Hazaribagh is due to the traversing being less intricate and requiring fewer stations to the square mile. The reduction in Shahabad is satisfactory, as the conditions were much the same as last year. In Midnapore the cost rate of Rs. 35·6 is satisfactory, as there were considerable difficulties owing to want of demarcation. Such difficulties must be expected during the first season's work in a new district. Labour rates are also higher in this district, and surveys will always prove slightly more costly than in the Bihar and Chota Nagpur districts.

5. Amongst innovations effected during the year may be mentioned the introduction of a new thana map showing all the details which appear on the standard maps of the Survey of India. The preliminary skeleton thana maps will, however, still be compiled and issued. Another change, which was tried tentatively and has proved a success, is placing the village line-clearing squads directly under the orders of the traversers concerned, instead of starting them off independently a long time ahead. In previous seasons complaints were fairly numerous that the line-clearing squads were unnecessarily harassing the villagers, but it was very difficult to get reliable evidence. The new procedure has saved a large number of complaints and has resulted in expedition of the work. Orders have been received during the year to print and keep in stock two copies in blue of each village map. These blue prints are to be utilized for future revision surveys, and will effect a very considerable saving hereafter on tracing work.

6. In paragraph 6 of last year's report I referred to the reorganization scheme for the clerical and menial staffs of the Bengal Survey Department. Several points were reconsidered during the year, but I understand that the scheme is now before the Government of India and that orders may be expected very shortly.

CHAPTER II.

PART I—REPORTS ON SURVEYS IN TEMPORARILY SETTLED AND GOVERNMENT ESTATES UNDER SETTLEMENT OF RENTS AND LAND REVENUE.

Nil.

PART II—REPORTS ON SURVEYS IN PRIVATE ESTATES.

Shahabad District.

Traverse Survey.

7. The traverse programme, comprising thanas Sassaram and Dehri, was notified in Government Notification No. 868 T.—R., dated 13th June 1910.

8. The area traversed is 780 square miles and comprises 895 villages.

9. There are 13,167 new theodolite stations which were marked by 113 masonry pillars, 1,269 stone prisms, 3,687 clay cylinders, and 2,522 wooden pegs. In the hilly and jungle portions of thana Sassaram the stations were marked by 3,725 local stones and 1,853 marks on rocks.

10. The traverse work was connected to one great trigonometrical station and 78 azimuths were observed.

11. The season's work has been plotted on 1,362 sheets on the 16" scale, 50 rough plots on the 4" scale, and 19 reductions on the 2" scale. The computations are complete in every respect. The plots have been despatched to the several officers concerned and there are absolutely no arrears.

12. The demarcation in the cultivated tracts was good, but none was apparent in the jungle and hilly tracts.

Hazaribagh District.

Traverse Survey.

13. The season's programme covered thanas Ganwan, Koderma, Jainagar, Barhi, Itkhori, Barkatta, Ichak and Hazaribagh, and was notified in Government Notification No. 867 T.—R., dated 13th June 1910.

14. The area traversed is 1,884 square miles, which completes all the abovementioned thanas, with the exception of 107 square miles of Forest Reserve and khas mahal in thana Koderma which had been already surveyed in 1901-1902-1903.

15. There are 2,201 villages in the area. The work has been checked by 221 observations for azimuth, and connections were made with 8 principal and 7 secondary stations of the Great Trigonometrical Survey. Also 7 stations of the Topographical Survey of 1871-72 were connected with.

16. There are 42,318 new theodolite stations, which are marked by 637 old masonry pillars and platforms, 136 iron pegs, 34,002 local stones, 3,918 marks on rocks, and 3,625 wooden pegs. The traverse stations of the 1905-06 survey along the Monghyr boundary were utilized as common stations.

17. The season's work has been plotted on seven sheets on 64" scale, 3,271 sheets on 16" scale, 123 rough plots on 4" scale, and 36 sheets of 2" reductions.

18. The demarcation in the cultivated tracts was fair, but in the hilly portions none was found.

19. The work is complete in every respect, and the plots have been despatched to the officers concerned.

Midnapore District.

Traverse Survey.

20. The programme, comprising thanas Rinpur, Salbani and Garhbeta, was notified in Government Notification No. 1649 T.—R., dated 24th September 1910.

21. The area accomplished is 954 square miles, covering 2,387 villages.

22. Azimuth observations were taken at 109 stations, and 6 stations of the Great Trigonometrical Survey have been connected with.

23. All the old traverse stations of 1907-08 of district Manbhum and of 1905-06 of district Singhbhum were found and used as common stations. Only a few stations of the traverse work of Matkadpur of season 1902-03 in thana Binpur could be traced and utilized.

24. There are 23,023 new theodolite stations which are marked by 16 masonry pillars, 4,433 stone prisms, 510 galvanized cylinders, 13,754 wooden pegs, 4,298 local stones, and 112 marks on rocks. The galvanized cylinders were used for all stations adjoining tri-junction stations along the Bankura boundary, also along the south-eastern portion of the periphery of the season's work, the object being to provide distinctive marks for operations which will follow after the lapse of some years. The utilization of local stones and marking on rocks was confined to the jungle areas.

25. There are 2,644 plots on 16" scale, 63 rough plots on 4" scale, and 31 of 2" reductions, all of which have been made over. The work is complete in every respect.

PART III.—REPORTS ON MISCELLANEOUS SURVEYS.

Calcutta Surveys.

26. The following are the main heads of the season's work :—

(*a*) Revision survey of Calcutta town.
(*b*) Redrawing of sheets of above.
(*c*) Demarcation of Municipal holdings.
(*d*) Wall map of Calcutta on 16" scale.
(*e*) Demarcation of revenue holdings and compilation of a register with area extraction.
(*f*) Compilation of revenue block maps.

27. The first four items are primarily for the Municipality, and the cost is borne in equal shares by Government and the Corporation. The last two items are purely Government work.

28. *As regards item* (*a*).—The only work remaining to be done was in areas left blank owing to demolition and reconstruction of new buildings.

29. *As regards item* (*b*).—The fair mapping of the town area was carried on throughout the year under report, but the sheets could not be completed owing to want of a decision as to how to deal with encroachments (*vide* paragraph 47 of last year's report). In May definite orders were received, and the whole of the sheets of the Southern Division were rapidly completed and sent for publication. Portions of the Northern Division have also been finished and sent for publication, and it is anticipated that all the maps will be finished by the end of December 1911.

30. *As regards item* (*c*).—During the year 5,269 Municipal holdings in the Northern Division and 10,183 holdings in the Sutanuty area have been demarcated. The difficulties of this work are referred to in paragraphs 39 and 40 of last year's report. The old block plans proved to be fairly good index maps, but they are not correct. A field book of the Northern Division is in existence, but the lengths of sides of holdings do not agree in most cases with the lengths as mapped on the block plans. Moreover, the original block plans have been corrected and altered from time to time as subdivision of holdings occurred, but there is nothing to show how these changes were carried out.

31. *Item* (*d*).—The compilation of the wall map has been proceeded with as steadily as possible, but owing to there being only one set of sheets which are constantly being referred to for boundary disputes, etc., it has proved difficult to arrange for steady and constant work on the wall map. It is now, however, hoped that the map will be complete by March 1912.

32. *Item (e).*—The demarcation of the revenue holdings was carried on at the same time as the demarcation of Municipal holdings. As indicated under item (*c*) the old maps only proved useful as mere index maps. The register-writing work is up-to-date, and the area calculations of the Northern Division were completed when a demand from the revenue authorities for areas of contained municipal holdings was received. This is being attended to, but it is now reported that it is necessary to determine the interests of parties in each holding. Correspondence on this point is in progress, but if it is found to be necessary, it will mean another extra demarcation.

33. *Item (f).*—In paragraph 48 of last year's report it was mentioned that it had not yet been decided as to what form the revenue block maps should take. It was decided during the year under report that the revenue units should be superimposed in red, and the compilation of the block maps has been proceeded with. The Southern Division should be published by March 1912, but the Northern Division must stand over till next financial year. All these maps have to be kept for inspection by the public for two months before they can be published.

34. In paragraph 41 of last year's report 48 disputes were mentioned as still for disposal. In addition to these, 377 cropped up in the Northern Division. They have all been decided by Mr. Smart.

35. The unsuitability of the Calcutta Survey Act, as regards summary powers to punish for non-attendance and refusal to comply with notices, has formed the subject of some correspondence during the year. It is now reported that several applications to relay boundaries according to the last survey had to be refused, as the Act does not contemplate any such procedure.

Howrah District.

Survey of the Grand Trunk Road.

36. A survey and demarcation of limits of the Grand Trunk Road from Bally Bridge to the Botanical Gardens has been carried out by the Calcutta Surveys for the Public Works Department.

37. The total length is 8·65 miles, which has been surveyed on the scale of 20 feet to the inch, but the demarcation is not yet complete. The names of owners of adjoining properties, as given on the Public Works Department maps, do not agree with present possession, so notices could only be issued after enquiry on the ground.

38. In this survey 77 disputes have been preferred up to date, and will be dealt with by a special Deputy Collector who has been appointed by Government.

39. The traversing and detail survey had to be carried on with very great care, as on this large scale very small details can be accurately mapped.

Orissa Feudatory States.

40. *Relaying boundary between Dhenkanal and Athgarh Estates.*—The work done during 1909-10 is described in paragraphs 65 to 70 of last year's report. This season the Political Agent, after inspecting the area, marked a line which has now been traversed and sites for 254 pillars have been fixed. The length of boundary affected is 13 miles. Copies of the traverse tables, field books and traces on 4" scale have been supplied to the Political Agent, who is arranging for the building of the pillars. Also copies of these records have been supplied to the Chiefs concerned. The cost of the work was met from a deposit.

Nepal-Purnea Boundary.

41. *Relaying of missing pillars.*—It was reported in 1909-10 that 2 masonry pillars and 20 wooden posts along the Nepal boundary were missing.

and sanction to undertake the work was given in Government letter No. 103T.—M.P.I., dated 26th April 1910, but as the season was so far advanced, sanction to postpone work until 1910-11 was received.

42. When the traverser proceeded to work, it was found that the actual work to be done consisted of relaying five masonry pillars and 42 wooden posts and fixing of 30 reference posts. The work has been completed and receipts taken from the chaukidars concerned. The Subdivisional Officer, Kishenganj, has been supplied with 4" tracing showing positions of all reference pillars, and is arranging for the permanent marking of same.

Bhagalpur-Purnea.

43. *Relaying boundary of Sonbarsa.*—The Collector of Bhagalpur asked for the demarcation, according to the Revenue Survey of 1845-47, of the boundary between the Sonbarsa Wards Estate in district Bhagalpur and the Darbhanga Raj Estate in district Purnea. The traverse work was connected with Purani Great Trigonometrical station. The sites for 185 pillars along 9 miles of boundary have been fixed, and copies of the traverse records and traces have been supplied to the Collector and the parties concerned. The cost of the work was met from a deposit.

44. *Relaying boundary of Dharampur-Gangapur.*—This work was in continuation of the foregoing item, and was undertaken at the request of the Collector of Bhagalpur and Manager of Raj Darbhanga. The sites of 146 pillars along 9 linear miles of the 1845-47 boundary between the Dharampur Estate in Purnea and Gangapur in Bhagalpur have been fixed, and copies of the traverse records and traces have been supplied to all concerned. The cost was met from a deposit.

45. *Relaying boundary of Jagatpur Jagat.*—This work was practically in continuation of the last two items and consisted of the relaying of the 1845-47 boundary between Jagatpur Jagat in Bhagalpur and the Darbhanga Raj in Purnea. The sites of 47 pillars have been fixed along 2½ linear miles of boundary. Copies of the traverse records and traces have been supplied to the Collector and parties concerned. This also was a deposit survey.

Shahabad District.

46. *Dumraon Municipality.*—The urban area, covering 241 acres, was traversed at the request of the Settlement Officer, and 7 plots on the 64" scale and 1 index chart on the 16" scale were made over to the Settlement Officer in December 1910. The cost is met by deposit.

Hazaribagh District.

47. *Hazaribagh Municipality.*—A traverse of the Municipal lands, covering 239 acres, has been carried out and 7 plots on the 64" scale and 1 chart on 16" scale have been despatched to the Settlement Officer. The cost is met by deposit.

Ganges Diara Special Demarcation Survey.

48. I have already submitted to the Board (*vide* my No. 1246, dated 25th September 1911) a detailed report on the work done during the year, but the objects of the special work now in progress in the diaras in Bengal may be shortly stated here.

49. The object of the scheme is the provision of a special set of maps, showing permanent marks and other prominent points in the diara tracts, also the differences between modern survey and revenue and diara survey village

boundaries, by means of which the relaying of any boundaries, in case of disputes or changes in the rivers, will be much facilitated.

50. The tract dealt with during the year extends from Manjhi on the Gogra river to Monghyr on the Ganges *i.e.*, about 50 linear miles, and covers 24 of the special maps with an approximate area of 720 square miles. The office work to date consists of the compilation of 69 special sheets on the 4" scale—many of these are complete and the remainder approaching completion.

51. I have already stated that in my opinion the work done has proved successful, and have advised its extension, at a moderate rate of yearly progress, to all the diaras of the Province.

Darjeeling District.

52. *Darjeeling Municipality*—At the request of the Municipality an experimental survey of Darjeeling was started in May 1911 under my personal supervision with a view to seeing whether it would be possible to revise Captain Harman's survey. I found that the changes were so great that a revision would be impossible, and the Municipality accepted my proposals for a new survey of details. The work is in progress and the greater portion of the traversing has been completed. The detail survey of all the bazar portion on the scale of 60"=1 mile is also practically complete, and detail survey of the central portion of Darjeeling on the 40" scale is in progress.

As the work was actually going on at the close of the survey year, supply of incomplete figures for traversing, etc., would serve no useful purpose.

PART IV.—REPORT ON THE BENGAL DRAWING OFFICE.

53. The detail figures of progress of the several sections are now, with the approval of Government, incorporated in tabular statement, Appendix III of this report.

54. The constitution of this office remained the same as last year, except that the Standard Mapping Section was increased, with the approval of the Surveyor-General of India, in order to bring up arrears of mapping of available material and also to provide material for supplementary topographical surveys by Survey of India parties. Progress has been good, and there is every reason to believe that the programme of arrears will be completed within the anticipated time. During the year 79 standard sheets, covering an area of 13,970 square miles, have been dealt with, of which 25, covering 5,923 square miles, were sent for publication, and work in all the others is well advanced.

55. In the Reproduction section the three graining machines mentioned in paragraph 8 of last year's report have been started and are working satisfactorily.

56. The total outturn of the Reproduction section, including thana maps, etc., was 543,130 copies as against 632,572 of the previous season. The deficit is due to the unavoidably late receipt of sheets from some of the settlements. I have been in consultation with the Director of the Department of Land Records on the subject, and the matter has our close attention.

57. In the Map Record Section 11,535 original sheets of village maps have been received, which brings the total to 118,055. The precautions prescribed in paragraph, 7 of last year's report against fire have been fully maintained, and duplication and storage of original maps and records in another building is continuing steadily.

58. Details of the work of the Provincial Drawing Office with regard to thana and tri-junction maps are given in the Appendix, and the Badar Section requires no special remarks.

CHAPTER III.

PART I.—TOURS OF THE DIRECTOR OF SURVEYS.

59. I have been in the field and on tour of inspection for 251 days during the year under report. I have inspected all sections of the Bengal Surveys, frequently. I attended the Annual Conference of Survey of India Officers at Calcutta, and under orders of the Board I visited Shillong in order to discuss procedure in diara surveys with the Director of Surveys, Eastern Bengal and Assam.

60. I have inspected a large percentage of the cadastral sheets and *parbis* of the Bihar and Chota Nagpur settlements, and can assure the Board that the required standard of accuracy is being well maintained. The style of drawing is on the whole distinctly good, and I have drawn attention to a few minor points requiring attention in order to improve the sheets for reproduction purposes.

61. The Surveyor-General of India inspected the Bengal Drawing Office and expressed himself as very satisfied with all he saw.

PART II.—SERVICES OF OFFICERS.

62. Captain R. Foster, Assistant Director, was employed up to the middle of April, when he proceeded on leave, on the special "diara" work. He had first to train the men in this new kind of work and then supervise them. He has done his work well.

63. Mr A. W. Smart, in charge of the Traverse work, has managed his section with conspicuous success. Although he had a heavy programme, covering a good deal of difficult ground, the class of work has never proved better.

64. Mr. L. F. Berkeley has managed the Bengal Drawing Office very well. He is always in close touch with all details of the many different kinds of work under his control.

65. Mr. R. B. Smart has as usual devoted himself to his work, and the intricate operations of the large-scale survey of Calcutta could not be in better hands.

66. Mr. E. G. Hardinge, in direct charge of the Standard Mapping Section, has worked very satisfactorily.

67. Messrs. C. S. Kraal, L. B. FitzGibbon, J. H. Johnson, P. D. Gomes and B. C. Gasper, all of the Traverse Section, are all reported to have worked well and given every assistance to the officer in charge. Messrs. Calvert and Gantzer joined late in the recess season, and have not served long enough yet for me to form an opinion as to their abilities.

68. In the Bengal Drawing Office Messrs. LeFranc, W. H. Beer, A. W. Skempton and A. H. Kraal are all very favourably reported on.

69. The relations between the Survey and Settlement Departments continue excellent, and there has been absolutely no friction. I personally owe a great deal to Mr. H. McPherson, I.C.S., Director of the Department of Land Records, whose valuable experience and hearty co-operation have made my task a very pleasant one.

I have the honour to be,

SIR,

Your most obedient servant,

R. T. CRICHTON, LT.-COL., R.A.,

Director of Surveys, Bengal.

APPENDIX I—PART A.

Summary of the outturn of work of the survey parties in Bengal for 1910-11.

District.	Traversing.				
	Number of villages.	Linear miles of chaining.	Number of stations at which dolite was set up.	Number of Azimuths.	Number of subtraverses.
1	2	3	4	5	6
Private Estates.					
Shahabad	895	2,497	13,167	78	684
Hazaribagh	2,201	6,553	42,318	221	1,976
Midnapore	2,387	4,126	23,023	109	796
Miscellaneous.					
Orissa Feudatory States—Athgarh-Dhenkanal.	...	14	269	...	...
Purnea—Nepal-Purnea boundary ...	...	13	73	...	...
Bhagalpur and Purnea—Sonbarsa and Darbhanga boundary dispute.	...	19	69	...	...
Dharampur—Gangapur boundary dispute.	...	8	42	...	...
Jagatpur Jagat boundary dispute ..	...	8	17	...	...
Shahabad—Dumraon Municipality ..	...	12	411	...	...
Hazaribagh—Hazaribagh Municipality	...	12	201	...	...
Ganges diara special survey ...	...	195	436	...	...
Howrah—Grand Trunk Road ...	...	9	260	...	...
Total ...	5,483	13,466	80,286	408	3,456

APPENDIX I—PART B.

Statement of outturn and cost rates.

District and Estate.	Description of work.	Estimated area to be dealt with in square miles.	Year of inception of operation.	Area surveyed in square miles.		Cost rate per square mile.		Balance of area remaining to be surveyed.	Estimated cost of completing the area in column 9.	Estimated final cost rate per square mile.
				During the year under report.	Totals, including previous years.	During the year under report.	From beginning to end of the year under report.			
1	2	3	4	5	6	7	8	9	10	11
Private Estates.									Rs.	
Shahabad	Traverse	4,373	1907	790	4,345	38·7	35·8	28	1,000	35·7
Hazaribagh	Ditto	7,021	1908	1,384	5,183	23·4	33·9	1,838	57,060	33·5
Midnapore	Ditto	4,133	1910	964	964	35·6	35·6	3,179	1,15,800	36·6
Miscellaneous.										
Orissa Feudatory States—Athgarh-Dhenkanal boundary	Ditto	...	1910	...	...	...	...	...	...	...
Purnea—Nepal-Purnea boundary ...	Ditto	...	1910	...	...	...	...	...	...	...
Bhagalpur and Purnea—Sonbarsa and Darbhanga boundary dispute.	Ditto	...	1911	...	...	...	...	...	...	...
Dharampur—Gangapur boundary dispute	Ditto	...	1911	...	...	...	...	...	...	...
Jagatpur Jagat boundary dispute ...	Ditto	...	1911	...	...	...	...	...	...	...
		Acres.		Acres.	Acres.					
Shahabad—Dumraon Municipality ...	Ditto	241	1910	241	241	...	...	...	...	...
Hazaribagh—Hazaribagh Municipality ..	Ditto	220	1911	220	220	...	...	...	...	...
Total ...	...	15,336	...	3,619	10,479	...	...	4,850	...	...

APPENDIX II.

Statement of sums expended for the year ending 30th September 1911.

District, etc.	Description of work.	Expenditure incurred during the year under report.			Total expenditure from inception to end of the year under report.		
		Actual cost.	Share of Director of Survey's pay and his office.	Total.	Actual cost.	Share of Director of Survey's pay and his office.	Total.
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Shahabad	Traverse	23,811	4,371	21,082	(a)1,24,008	23,280	1,48,196
Hazaribagh	Ditto	26,444	5,066	27,450	1,42,413	23,739	1,71,152
Midnapore	Ditto	26,747	5,344	24,091	28,747	5,344	34,091
	Miscellaneous.						
Ganges Diara—special survey	Traverse and demarcation	9,962	1,853	11,814	11,460	2,109	13,569
Purnea—Kalyalay lost pillars on Purnea-Nepal boundary	Ditto ditto	1,842	305	1,851	1,842	305	1,851
Purnea—Bi-ordinary between Sonbarsa and Darbhanga Estate, pargana Dharampur.	Ditto ditto	376	70	446	376	70	446
Purnea—boundary between Gangapur and Dharampur Estate.	Ditto ditto	306	57	363	306	57	363
Bhagalpur—boundary across Jagatpur, taluka Dhapdhara.	Ditto ditto	118	22	140	118	22	140
Howrah Singh—Howrah Municipality	Traverse	135	25	160	135	25	160
Shahabad—Dumraon Municipality ...	Ditto ditto	260	48	308	260	48	308
Calcutta revision surveys	Detail survey and mapping.	17,873	3,385	21,195	59,574	10,325	70,897
Ditto Town maps	Mapping	7,500	1,313	8,813	11,084	2,121	13,205
Ditto Revenue Surveys	Detail survey and mapping.	6,709	1,307	8,016	6,758	1,307	8,065
Ditto Revenue maps	Detail survey and records	7,573	1,323	8,895	8,830	1,566	10,396
Ditto wall maps	Mapping	326	111	709	2,442	457	2,899
Survey of Howrah Grand Trunk Road	Traverse, detail survey and mapping.	2,465	462	2,927	2,465	462	2,927
Total ...	Traverse, detail surv y and mapping.	1,13,504	21,101	1,34,605	2,21,446	35,940	2,77,386
		45,080	7,915	49,845	91,821	16,565	1,07,986
	Standard maps	40,597	7,534	48,861	1,94,272	23,250	2,17,525
	Bastas	5,228	972	6,200	41,361	6,224	46,585
	Map Records	5,714	1,062	6,776	33,326	5,827	39,153
	Thana Maps	(c)3,144	564	3,708	27,569	3,217	30,786
	Tri-junction mark maps ...	(c)8,210	587	3,097	14,721	1,713	16,434
	District maps	1,909	336	2,145	5,487	691	6,178
	Ganges diara map compilation.	3,276	423	3,699	5,246	944	6,291
	Topo. survey of 3 villages tran-ferr. d from district Mahbub to Purnea.	175	33	208	175	33	208
Bengal Drawing Office	Reproduction for attestation.	965	183	1,148	23,632	2,134	25,766
	Reproduction for distribution and sale.	56,350	10,488	66,708	2,33,323	34,885	2,67,708
	Reproduction of Panchanagram maps.	468	91	579	468	91	579
	Tracing and examination of Thakbust maps of Burdwan	498	93	591	1,410	247	1,657
	Printing of 8" maps of Sundarbans.	247	46	293	596	105	701
	Index maps for Annual Extra Departmental Work	121	22	143	799	140	939
		3,338	603	3,940	11,851	1,957	13,808
	GRAND TOTAL ...	2,61,644	59,324	3,23,768	9,90,898	1,49,103	11,40,998

(a) Includes cost of reproduction.
(b) Includes Rs. 400 on account of 4 per cent. charges for instruments for 1907-08.

APPENDIX III.

STANDARD MAPS.								TRAVERSE CHART.	
Sent for publication.	Complete, except final examination.	Complete for recent survey held up for future surveys.	In hand in various stages for publication.	In pencil with boundaries in blue for thana mapping purposes.		Published for revision survey.	Fiscal boundaries coloured.		
Sheets.	Sheets.	Sheets.	Sheets.	Completed. Sheets	In hand. Sheets.	Sheets.	Published prints.	Unpublished prints.	Completed.	In hand.
1	2	3	4	5	6	7	8	9	10	11
73 E/13·16 ...	73 K/3 & 7 ...	72 G/16 ...	73 G/3 ...	73 C/3·4 ...	64 K/13·16 ...	73 F/1 to 16 ...	15	19 and 9 have been examined and corrected.	...	...
73 L/5·9 ...	73 K/4·8 ...	73 H/15 ...	.....	73 C/6·7·8 ...	64 L/9·13 ...	.....	...	.....	...	...
73 O/11·15 ...	73 L/10·13·14 ...	73 L/1·2·6) ...	.....	73 C/10·11·12 ...	64 O/4 ...	.....	...	.....	...	...
73 B/2·7 ...	73 O/9 ...	73 B/6·8 ...	.....	73 C/14·15 ...	64 P/1·5 ...	.....	...	.....	...	...
.....	73 P/1·5 ...	.....	.....	73 L/2·3·12 ...	.....	.....	...	.....	...	...
.....	73 B/3·6 ...	.....	.....	73 L/15·16 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 O/12·16 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 P/5 to 15 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 E/5·9 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 E/10·13·16 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 E/14·15 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 I/1·2·6 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 I/3·15 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	73 M/1·5 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	63 O/15·13·16 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	63 O/6·7·9·10 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	64 O/11·14·15 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	64 O/15·16 ...	.....	.....	...	.....	...	...
.....	.....	.....	.....	..

DIX III.

Drawing Office.

1910-11.

Ganges Diara Maps, preliminary stage.				Thana, Trijunction Marks, and District Maps. (a)										
Completed.					Thana Maps.						Trijunction Mark Maps.			District Maps.	
					Final.			Preliminary.							
During year.	Previously.	Total.	In hand.	District.	Thana.	Sheets.	Copies.	Thana.	Sheets.	Copies.	Thana.	Sheets.	Copies.	Completed.	In hand.
13	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
33	34	(b) 67	...	Darbhanga ...	Warisnagar ...	1	70	.....	...	...	.....	...	...	...	...
...	...	...	...	.....	Dalsingsarai ...	1	70	.....	...	...	.....	...	...	...	...
...	...	...	...	.....	Samastipur ...	1	.	.....	...	...	.....	...	...	...	...
...	...	...	...	.....	Rosera	1	...	.....	...	...	.....	...	...	...	...
...	...	...	...	Champaran ...	Bagaha	2	...	.....	...	...	.....	...	...	...	...
...	...	...	...	Santhal Parganas	.....	...	..	Pakaur Damin	...	400	Pakaur Damin	...	95	...	...
...	...	...	...	.....	.....	...	...	Rajmahal ,, ...	...	400	Rajmahal ,, ...	...	170	...	...
...	...	...	...	.....	.....	...	...	Godda ,, ...	...	400	Godda ,, ...	7	140	...	...
...	...	...	...	.....	.....	...	...	Dumka ,, ...	...	...	Dumka ,, ...	...	85	...	...
...	...	...	...	.....	.....	...	...	Pakaur, outside Damin.	2	400	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Rajmahal ,,	2	400	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Godda ,, ...	3	600	.....	...	...	...	...
...	...	...	...	Sambalpur ...	.....	...	...	Ambabhona ...	1	...	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Bhaili	1	...	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Bargarh	1	...	.....	...	...	...	...
...	...	...	...	Shahabad ...	.....	...	...	Arrah	...	...	Arrah	...	12	...	...
...	...	...	...	.....	.....	...	...	Buxar	2	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Dumraon	2	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Bikramganj ...	2	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Piro	2	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Sheikpur	1	3	.....	...	...	...	...
...	...	...	...	Patna	.....	...	...	Bihar	...	12	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Barh	...	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Mokameh ...	...	6	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Bikram	6	18	Bikram	...	12	...	...
...	...	...	...	.....	.....	...	...	Dinapore	4	12	Dinapore	...	2	...	...
...	...	...	...	.....	.....	...	...	Patna	4	12	Patna	...	4	...	...
...	...	...	...	.....	.....	...	...	Bihta	4	12	Bihta	...	10	...	...
...	...	...	...	.....	.....	...	...	Islampur ...	4	12	Islampur ...	...	6	...	...
...	...	...	...	.....	.....	...	...	Wahar	4	12	Maner	...	6	...	...
...	...	...	...	.....	.....	...	...	Masandhi ...	4	12	Masandhi ...	...	8	...	...
...	...	...	...	.....	.....	...	...	Patna	4	12	Patna	...	4	...	...
...	...	...	...	.....	.....	...	...	Phulwari ...	4	12	Phulwari ...	...	4	...	...
...	...	...	...	Monghyr	.....	...	...	Chakai	615	1,845	Chakai	11	98	...	...
...	...	...	...	.....	.....	...	...	Jamalpur ...	3	9	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Jamui	615	1,845	Jamui	3	69	...	...
...	...	...	...	.....	.....	...	...	Kharagpur ...	4	12	Kharagpur ...	...	46	...	...
...	...	...	...	.....	.....	...	...	Monghyr ...	4	12	Monghyr ...	...	86	...	...
...	...	...	...	.....	.....	...	...	Sikrhpura ...	3	9	.....	...	...	...	...
...	...	...	...	.....	.....	...	...	Sikandra ...	7	21	.....	...	...	...	...
...	...	...	...	Bhagalpur ...	.....	...	...	Katoria	3	615	Katoria	9	90	...	1
...	...	...	...	Purnea ...	.....	...	...	.....	...	...	.....	...	...	1	...
...	...	...	...	Correction slips ...	.....	...	...	.....	2	166	.....	...	...	...	...
...	...	...	...	2nd reductions ...	.....	...	...	.....	86	1,782	.....	...	...	...	...
...	...	...	...	Attestation Mujmillis.	.....	...	...	.....	29	386	.....	...	...	...	...
33	34	67	...	.....	.....	7	140		129	2,161		32	563	1	1

which copies have been printed and supplied during the year.
with fixing points. The Revenue and diara survey boundaries are now being put on to them.

DISTRICT.	REPRODUCTION OF VILLAGE MAPS SECTION. (d)										BADAR SECTION. (e)						
	Class of Reproduction.	Season of survey, if any.	Previously supplied.		Supplied during the year.		Total to date.		Complete or incomplete.		Badars corrected in original maps.	Thana numbers entered in—		Village names corrected in—		Index of Sanctioned and district maps, etc., adopted for previous surveys and other records.	
			Sheets or maps.	Copies.	Sheets or maps.	Copies.	Sheets or maps.	Copies.				Traverse volumes.	Field books.	Traverse volumes.	Field books.	Skeleton traverse plots made for Settlement Officers and others.	Index of Sanctioned and district maps, etc., adopted for previous surveys and other records.
			Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.	Villages.
28	29	30	31	32	33	34	35	36	37		38	39	40	41	42	43	44
Gaya			...	...	...	...	...	...	...		...	...	...	...	...	...	2
Patna	Final ...	1907-09	1,491	155,310	2,178	240,551 (a)	3,669	395,861	Complete		... 33	712	...	...	...	...	...
Shahabad ...	Final ...	1905-16	...	...	1,194	97,725	1,194	97,725	Incomplete.			...	...	...	...	...	...
	Attestation	1910-11	...	...	2,618	16,283	2,618	16,283	Complete		14	...	...	...	...	...	...
Champaran	.....		...	...	...	...	...	...	...		...	...	...	...	...	...	...
Darbhanga	Unforeseen		...	...	383	1,910	383	1,910	Complete		...	...	...	...	...	...	...
Muzaffarpur	.....		...	...	...	...	...	...	...		...	...	...	...	...	...	...
Saran	Unforeseen		...	...	239	2,390	239	2,390	Complete		...	...	...	...	...	...	...
Bhagalpur	.....		...	...	...	...	...	...	...		... 19	...	...	...	...	...	...
Darjeeling	.....		...	...	...	...	...	...	...		...	...	...	...	...	...	...
Monghyr	Final ...	1906-09	1,231	126,485	338	16,968	1,569	143,453	Complete		... 45	209	13	17	...	...	...
Purnea	.....		...	...	...	...	...	...	...		... 25	226	...	...	...	...	...
Sonthal Parganas ...	.....		...	...	...	...	...	...	...		... 7	...	...	1,020	2,064	...	...
Angul and Khondmals.	Unforeseen		...	...	5	60	5	60	...		...	617	172	695	903	...	1
Balasore	Final ...	1907-10	3,833	184,959	498	23,257 (a)	513	179,793	Incomplete.		...	...	...	...	...	...	...
Cuttack	Final ...	...	...	...	1,908	(b) (a) 97,086	1,908	97,086	Ditto		9	...	...	385	379	9	...
Puri	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Sambalpur	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Hazaribagh	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Manbhum	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Palamau	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Ranchi	Unforeseen	...	...	...	4	80	4	80	Complete		...	256	225	...	...	...	...
Lohardaga	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Singhbhum	.....	...	...	...	...	...	...	...	...		...	1,675	1,672	...	...	...	...
Santhals	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Birbhum	Attestation	...	...	...	101	303	101	303	Complete		...	...	...	...	...	...	...
Burdwan	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Hooghly	Final ...	...	32	2,000	7	370	39	2,370	Incomplete.		1	...	...	...	...	...	...
	Attestation	...	...	...	33	166	33	166	Ditto			...	...	...	...	...	...
Howrah	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Midnapore	Final ...	...	813	30,355	710	(c) 29,168	(c) 1,523	59,523	Incomplete.		237	...	...	...	...	...	63
24-Parganas	Suburbs of Calcutta.	...	...	...	304	3,940	304	3,940	Complete		...	...	...	...	...	...	...
Jessore	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Khulna	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Murshidabad ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Nadia	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Diara survey ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Cooch Bihar ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Rajshye	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Sikkim	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Udaipur estate ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Sreemangal	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Province of Bengal	Index Map	...	...	...	2	810	2	810	...		...	...	...	...	...	...	...
United Provinces ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Eastern Bengal ...	.....	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Quasi-official and miscellaneous work.	.....	...	...	...	459	15,776	459	15,776	...		...	...	...	...	...	...	...
	.....	...	...	...	11,023	558,966	...	...	...		299	3,638	3,626	2,844	3,415	9	66

(a) Including blue prints.
(b) Includes 8 sheets and 160 copies of Ranki revenue-free estate in Cuttack.
(c) Includes 95 sheets and 538 copies of Bhetia estate in district Midnapore.
(d) Columns 33 to 37 can be filled up for only settlements in progress.
(e) Offerts have been entered in traverse tables of 522 villages of Patna and Shahabad.
(f) There is in the Record Section, in addition to the records shown in columns 46 to 67 a balance of 6,024 prints of the Calcutta Suburban maps after a sale of 396 copies in the year.
(g) Enlarged railway maps for Deputy Commissioner.

B. S. Press—22.12.1911—2551.J—896—T. W. L.

DIX III—*concld.*

DRAWING OFFICE.

1910-11.

MAP RECORD SECTION. (*f*)																									EXTRA DEPARTMENTAL WORK.	
Original cadastral and topo maps.			Revenue Duars and Bhavilla-cacoe Survey maps.			Traverse Volumes of all kinds.			Field Books of all Kinds.			Calcutta Survey Fair Maps.			Thana, Tripuse-tum, Index and other maps and Traverse plots.			Tracings for reproduction.						Grand Total.	Copies supplied of revenue duars and other survey maps.	Maps completed for officials and others.
Previously.	During year.	Total.	Previously.	During year.	Total.	Previously.	During year.	Total.	Previously.	During year.	Total.	Previously.	During year.	Total.	Previously.	During year.	Total.	Previously.	During year.	Total.						
Sheets.	Sheets.	Sheets.	Vols.	Vols.	Vols.	Vols.	Vols.	Vols.	Vols.	Vols.	Vols.	Sheets.	Sheets.	Sheets.	Sheets.	Sheets.	Sheets.	Sheets.	Sheets.	Sheets.						
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66				67	68
3,396		3,396	58	1	59	17	...	17	44	1	45	...	...	...	47	...	47	279	2	281	3,845				...	...
2,363	1,770	3,733	38	1	17	17	...	17	67	...	67	...	...	...	113	19	132	...	15	15	3,964				...	...
5,216	1,940	6,463	96	1	69	7	...	7	89	24	113	...	...	...	63	44	*87	...	...	...	6,719				...	...
5,895	...	5,895	...	...	...	25	...	25	52	...	52	...	...	...	74	...	74	5,460	28	5,488	11,334				...	...
9,952	...	9,952	45	1	46	24	...	24	71	1	71	...	...	...	270	13	283	7,852	...	7,852	17,674				...	...
4,854	...	4,854	...	...	...	25	...	25	54	...	54	...	...	...	28	...	28	6,240	...	6,240	12,122				...	...
7,251	...	7,259	36	1	37	26	...	26	82	...	82	...	...	...	81	...	81	6,859	...	6,859	13,991				...	...
5,916	1	5,917	26	1	27	29	...	29	63	...	63	...	...	...	233	12	245	1,927	233	2,160	8,745				...	...
590	...	590	16	1	17	2	...	2	13	4	17	...	...	...	4	...	4	213	...	213	234				...	...
7,724	797	7,961	39	1	40	42	...	42	95	...	95	...	...	...	164	45	209	3,198	379	3,577	*12,514				...	...
8,184	1	8,185	43	4	47	41	...	41	84	...	84	...	...	...	465	...	465	2,967	54	3,021	*10,798				...	...
6,213	3,743	11,956	...	...	...	64	...	64	129	...	129	...	...	...	419	11	430	7	4	11	11,996				...	...
975	...	975	...	...	...	...	...	...	...	...	...	...	...	...	7	...	7	2,813	3	2,823	13,044				...	...
4,257	...	4,257	32	1	33	26	...	26	60	...	60	...	...	...	13	...	13	7,296	699	7,994	12,3.2				...	...
8,049	...	8,049	49	1	50	54	...	54	118	5	123	...	...	...	23	...	23	7,094	18	7,112	15,411				...	...
7,086	...	7,086	29	1	30	25	...	25	73	...	73	...	...	...	34	...	34	7,460	...	7,460	15,376				...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	206	...	206	...	...	...	3322				...	...
555	...	555	19	2	21	2	...	2	10	63	73	...	...	...	26	60	76	124	...	124	951				...	...
...	...	...	5	1	6	1	...	1	11	9	20	...	...	...	9	...	9	...	...	...	65				...	...
714	...	714	...	...	...	4	...	4	14	...	14	...	...	...	...	...	...	...	...	...	732				...	...
6,196	1,982	7,178	...	...	...	42	...	42	118	1	119	...	...	...	221	...	221	981	5	986	8,640				...	...
476	...	476	23	...	23	...	...	...	12	...	12	...	...	...	...	...	...	...	...	...	512				...	...
3,459	1,003	3,462	...	...	...	25	10	...	86	...	91	...	...	...	65	...	65	...	...	...	3,618				...	...
517	...	517	10	1	11	11	...	11	...	...	...	...	...	...	17	...	17	...	...	...	545				...	...
93	...	93	50	1	51	1	...	1	4	...	4	...	...	...	...	...	...	...	...	...	138				...	...
154	...	154	14	...	14	19	...	19	91	1	92	...	...	...	1	...	1	...	...	...	229	(5)			...	...
62	17	79	32	1	34	1	...	1	68	...	68	...	...	...	9	...	9	...	...	...	197				...	...
209	6	215	...	...	...	2	...	2	2	...	2	...	...	...	...	...	...	...	...	...	219				...	...
3,649	21	3,670	39	1	40	25	...	25	123	...	123	...	...	...	107	...	107	103	...	103	3,978				...	...
421	...	421	46	6	52	6	...	6	24	9	35	1,329	...	1,329	10	...	10	...	...	...	3,354				...	...
...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	2				...	...
457	...	457	32	6	38	...	...	...	11	27	38	...	...	...	10	...	10	...	...	...	86				...	...
255	...	255	21	2	23	12	...	12	...	...	...	...	...	...	17	...	17	266	...	266	567				...	...
1	...	1	54	8	62	2	...	2	34	39	73	...	...	...	7	...	7	...	...	...	219				...	...
...	...	...	21	1	22	22	...	22	...	82	82	...	...	...	...	...	...	...	...	...	126				...	...
...	...	...	29	...	29	3	...	3	...	63	63	...	...	...	...	...	...	...	...	...	95				...	...
...	...	...	2	1	3	...	...	...	1	3	4	...	...	...	...	...	...	...	...	...	7				...	...
...	...	...	...	...	...	1	...	1	2	...	2	...	...	...	...	...	...	...	...	...	3				...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	...	24	...	...	...	24				...	...
...	...	...	...	...	...	...	...	...	9	16	25	...	...	...	6	...	6	...	...	...	31				...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	6	...	...	...	6				...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36				...	...
11	...	11	6	...	6	15	...	15	9	...	9	...	...	...	36	...	36	...	...	...	55				...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	998				11	
106,159	11,535	118,055	903	66	946	668	35	724	1,716	371	1,866	1,819	...	1,819	3,196	178	3,374	68,490	1,735	69,214	186,925				1,059	69

(a) Thakhast maps for Collector and Board's maps.
* References have been entered on 10 original sheets of the Collector of Monghyr.
† A comparative map has been prepared for ... and has been examined on all cadastral sheets of Champaran, Muzaffarpur, Darbhanga, Bhagalpur and ...
‡ The central zone along Nepal boundary pillars, and report made.
Purnea to see if it is the correct width throughout.
§ Copies of 3 tracings of 2 villages each have been supplied to Settlement Officers.
Revenue Survey map of one village have been supplied to Settlement Officer, Bihar, and 7 copies of the maps of the Calcutta Suburbs have been ... for the Settlement Officer, Bihar, and 7 copies of the maps of the Calcutta Suburbs have been
‖ Areas of 36 Villages have been extracted ...
coloured for private parties.

R. T. CRICHTON, LIEUT.-COL., I.S.,
Director of Surveys, Bengal.

REVENUE DEPARTMENT.

LAND REVENUE.

CALCUTTA, THE 22ND FEBRUARY 1912.

RESOLUTION—No. 928L.—R.

READ—

The Survey and Settlement Reports for the year ending the 30th September 1911.

THE area of the province as now constituted is 115,792 square miles. Including 3,567 square miles of original work completed during the year ending the 30th September 1911, the total area, which has been cadastrally surveyed, and for which a record-of-rights has been prepared, under the control of the Director of Land Records, is 54,959 square miles; and topographical or forest surveys have been made in respect of an additional area of 9,243 square miles. The tracts which have been completed entirely are the temporarily-settled estates of Orissa, where the operations included a resettlement of the land revenue, and the Tirhut and Bhagalpur Divisions. In the Patna Division, the district of Patna will be completed by the end of March 1912, while in Shahabad, which was begun in the field season of 1907-08, the operations will come to a close in the financial year 1914-15. In the district of Gaya, the traverse survey has only just started, and the whole work will not be finished until about October 1917. Of the five districts in the Chota Nagpur Division, Ranchi and Singhbhum have been practically completed; in Hazaribagh operations were commenced in the field season of 1908-09, and will be completed in the financial year 1915-16. In Manbhum, Parganas Barabhum and Patkum, comprising an area of 934 square miles, were taken up in 1908-09 in advance of the rest of the district, owing to the strained relations which existed between the Midnapore Zamindari Company and their tenants and to the necessity for an early solution of the Ghatwali question. The operations in these two parganas will probably be completed in the ensuing financial year. The rest of Manbhum, covering an area of 3,250 square miles, and the district of Palamau are the only areas which remain to be dealt with in the Chota Nagpur Division. In the latter, operations will be commenced in the field season of 1912-13.

As regards the Presidency and Burdwan Divisions, the only tracts which have, so far, been taken in hand are the district of Midnapore and an area of 136 square miles in the Rampur-Hât subdivision of the district of Birbhum. In the former district, the settlement of the Government and temporarily-settled estates and of certain scattered private estates, covering in all over 1,000 square miles or about one-fifth of the district, has been completed, and it has now been decided to extend the work to the remainder of the district. The traverse survey was commenced in October 1910, and the operations are likely to continue till about the end of September 1917. The Santhal area in Birbhum was taken up in 1909-10 in advance of the provincial programme, in consequence of serious discontent amongst the Santhal cultivators, and is likely to be completed in the ensuing financial year

2. During the year under report, the programmes of both the Survey and the Settlement Departments were practically carried out in full. The outturn, (3,618 square miles), of traverse survey, which was carried on in the districts of Hazaribagh, Shahabad and Midnapore, was practically the same as in the previous year (3,655 square miles). As compared with 1909-10, there was a reduction of cost rates in Hazaribagh (from Rs. 35·2 to Rs. 30·5) and in Shahabad (from Rs. 36·5 to Rs. 35·7). In the former district, the traversing was less intricate and required fewer stations to the square mile, but in the latter the conditions were much the same as in the previous year. It is

satisfactory to note that in Midnapore, where labour rates are higher than in Bihar or Chota Nagpur, and where the usual difficulties of the first season's work had to be encountered, the cost per square mile amounted only to Rs. 35·6.

Notwithstanding various difficulties, good progress was made in the revision survey of Calcutta and allied items of work, which are nearing completion. The experimental diara survey commenced in the preceding year was continued, and covered about 50 linear miles. The work has so far proved successful, and a proposal to extend it gradually to all the diaras of the Province is now under consideration. In the Bengal Drawing Office, good progress was made in the various branches, and the Surveyor General of India, who inspected the office, expressed his satisfaction with the work which is being carried out.

The work of the Settlement Department lay in 15 districts, and consisted of the settlement of rents payable by tenants and of land revenue in Government or temporarily-settled estates, the preparation of a record-of-rights with the settlement of fair rents on the application of landlords or tenants in permanently-settled tracts, and the revision of the cadastral survey and record-of-rights in the districts of Cuttack, Puri and Balasore, with experimental maintenance of the record in Balasore.

4. The total area cadastrally surveyed was 3,378 square miles as against 3,474 square miles in the previous year, and the Lieutenant-Governor in Council is glad to learn that the Director of Surveys, who inspected a large proportion of the work done in Bihar and Chota Nagpur, found that the required standard of accuracy was being well maintained by the settlement staff, and that the style of drawing was, on the whole, distinctly good.

Including the revisional and experimental maintenance work in Orissa, the total number of tenancies for which particulars of rents and status were recorded during the year was 1,435,342 as against 1,134,366 in 1909-10. The number of cases in which rents were settled by compromise under section 109 C of the Bengal Tenancy Act was smaller than in the previous year, but it was sufficiently large to show that the procedure continued to be useful and to be appreciated by the landlords and tenants concerned. In Shahabad especially, a considerable number of longstanding disputes were satisfactorily terminated with the help of this section. There was a large amount of settlement of fair rents under section 105 of the Bengal Tenancy Act and section 85 of the Chota Nagpur Tenancy Act, notably in South Monghyr Patna, Ranchi, Dhalbhum and the Jagir Mahals including Parikud in the district of Puri, and moderate enhancements were allowed on the grounds of rise in prices and excess area. In the Puri Jagir Mahals and in Dhalbhum, the chief work of the year was the settlement of rents, with which was combined the commutation of produce rents. In the former area, a complete rent settlement of the tract has been made, and all produce rents have been commuted to cash rents; while in Dhalbhum about two-thirds of the pargana have been similarly dealt with. In the latter tract, the Midnapore Zamindari Company themselves applied for the commutation of produce rents: the reason apparently being that, in a large zamindari where rents are collected by underlings, much of the produce is intercepted by them, and it is of advantage to the zamindar to have produce rents replaced by cash rents that are nominally lower. Commutation cases disposed of during the year in South Monghyr numbered 4,726, and in Patna 3,080. It is noticed that a large number of appeals are pending against the commutation proceedings in these districts, and it is hoped that steps will be taken to dispose of them at an early date.

5. The provisions of section 112 of the Bengal Tenancy Act were for the first time put in force in the case of the estate of Babu Sukhan Singh in South Monghyr. The Director of Land Records reports that considerable difficulties were experienced, owing partly to the obstructive attitude of the landlord and partly to defects in the section itself. He suggests that the section should be amended so as to give the settlement officer fuller powers to deal with produce rents and with arrears. Fuller experience of the working of the section is, however, necessary before any definite proposals for its amendment can be formulated.

6. The Director of Land Records has drawn attention to the widespread disregard by the landlords of South Bihar of the provisions of section 56 of the

Bengal Tenancy Act relating to the grant of proper rent receipts, and to the inadequate penalties imposed in many cases by Revenue Officers under section 58. Mr. McPherson's remarks on this point should be brought to the notice of the Commissioners of the Bhagalpur and Patna Divisions and of the district officers concerned. The Lieutenant-Governor in Council is glad to see that the judicious working of the corresponding provisions of the Chota Nagpur Tenancy Act have had a marked effect in producing obedience to the law in Chota Nagpur, and he trusts that the same results will be achieved in Bihar.

7. The facts as to the agrarian conditions of the Santhal villages in the Rampur Hât subdivision of Birbhum, which have been brought to light by the settlement proceedings, have fully justified their extension to that area. In paragraph 78 of the Director's report a vivid picture has been given of the abuses prevalent in Hazaribagh. The attestation stage has disclosed that the raiyats as a body are under the heels of the landlords and that the absence of litigation is due not to satisfactory relations between the landlords and their tenants, but to the ignorance of the tenants of their rights and to their despair of successful resistance to the landlords in the courts. It is said to be a common practice with the landlords to evict their tenants without bringing any suit. Illegal enhancements of rent were found in nearly every village, and had frequently been repeated at five-yearly intervals. The worst evils were found in areas under the *thikadari* system, where villages are leased out by the landlords on short temporary leases to farmers, who, having no permanent interest in the villages, merely try to exact the largest possible sum from the raiyats during the term of their contract. It is hoped that the settlement operations, by providing an authoritative record-of-rights and obligations and by their educative effect, will appreciably improve the condition of the tenantry in this district, as they have in others

8. Good progress was made in the work of revising the records in Orissa. Draft publication of records was completed in all three districts, and considerable advance was made in final publication. In both cases the records were published at convenient central camps instead of in the village,—an innovation which is reported to have been a complete success, as regards economy and expedition of work, wherever it has been adopted. The volume of case work is now expected to be much heavier than originally anticipated, but as the additional cost will be recouped from court-fee receipts, the net total expenditure on the operations will not, in all probability, much exceed the estimate.

9. The experiment of annual maintenance of records in Balasore was extended, in the year under review, to the whole district and considerable progress was made. Experience showed, however, that any system of efficient annual maintenance must involve very heavy expenditure, and in July, in view of the orders received from the Government of India, the work was stopped and the rest of the year devoted to the preparation of a programme of triennial maintenance in Balasore, and such portions of Cuttack as might be ready for the experiment in the present field season. The whole question is now under the consideration of Government and a report will shortly be submitted to the Government of India.

10. The work of the Land Records staff in Sambalpur was performed satisfactorily. The mutation offices established in North Bihar under the Land Records Maintenance Act, 1895, continued to be unsuccessful, but the Lieutenant-Governor in Council agrees with the Director of Land Records that the question of their abolition should stand over until it has been decided when the revision survey and record-of-rights in North Bihar is to be taken up. The record of mutations in Government estates was on the whole satisfactory, but in Wards' estates the standard attained still leaves much to be desired and the Board should draw the attention of the local officers to the subject. His Honour in Council notices with satisfaction that district officers are taking a growing interest in the maintenance of boundary marks, and that cadastral maps and settlement records, wherever they exist, are freely consulted and are found to be invaluable in criminal cases and in all branches of revenue work.

11. The Survey Department was in charge of Colonel Crichton, C.I.E., for the whole year, with the exception of a period of 20 days during which Captain R. Foster, the Assistant Director, officiated. The Hon'ble Mr. H. McPherson

was in charge of the Department of Land Records throughout the year. The two departments worked in perfect harmony and the usual high standard of efficiency was maintained. The thanks of the Lieutenant-Governor in Council are due to these officers, and also to Messrs. J. D. Sifton, J. A. Hubback, J. F. W. James and J. Taylor, who were in charge of the larger settlements. His Honour in Council is also pleased to notice the good services of a large number of other officers of both departments, whose names have been mentioned in the concluding chapters of the two Reports.

ORDER—Ordered that this Resolution be published in the Gazette and that a copy of it with copies of the two Reports be submitted to the Government of India.

By order of the Lieutenant-Governor in Council,

J. H. KERR,

Secretary to the Government of Bengal.

No. 1057L.—R.

COPY, with copies of the two reports, forwarded to the Surveyor-General of India, for information.

No. 1058L.—R.

COPY, with copies of the two reports, forwarded to the Municipal Department of this Government for information.

No. 1059L.—R.

COPY, with copies of the two reports, forwarded to the Appointment Department of this Government for information with special reference to paragraph 11 the Resolution.

By order of the Lieutenant-Governor in Council,

R. N. REID,

Under-Secretary to the Govt. of Bengal.

CALCUTTA,
The 4th March 1913.

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